Journal

OF THE NATIONAL ASSOCIATION OF CHIROPODISTS

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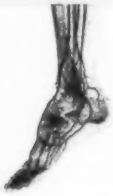

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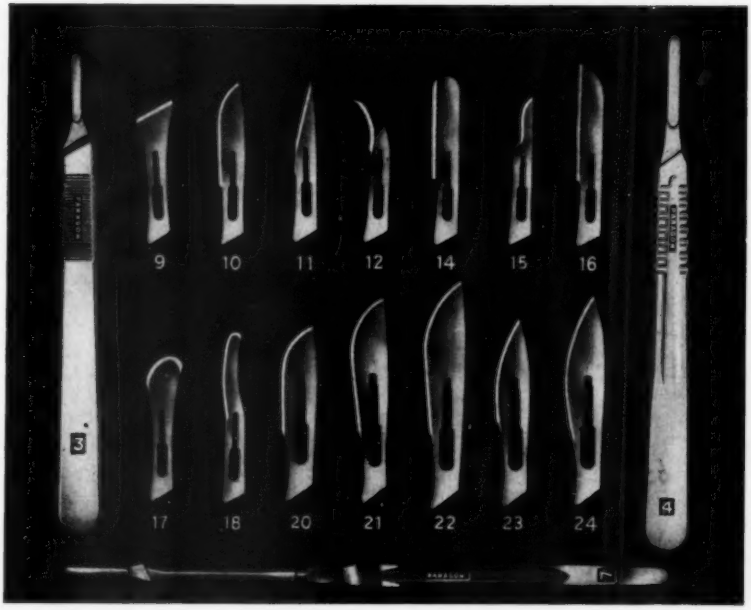

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The Illinois Chiropody Examining Committee will meet in Chicago on December 19-21, 1956 at 160 No. LaSalle Street. Reciprocal applicants are interviewed and examinations will be held on the above date. **Board Secretary:** R. G. Keeley, D.S.C., 621 So. Poplar, Centralia, Ill.

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The next board meeting of the Board of Registration in Chiropody-Podiatry will be held for reciprocity, conditionally, and examination, June and December, at the State House, Boston, Mass. **Board Secretary:** Charles H. Thorner, 1369 Hancock St., Quincy 69, Mass.

Minnesota
The Minnesota Board of Chiropody Examiners will hold its next meeting for examination on June 20, 1957 at the Minnesota State Capitol in St. Paul, Minn. **Board Secretary:** H. W. Leibold, D.S.C., 221 Hamm Bldg., St. Paul 2, Minn.

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The next board meeting of the Missouri State Board of Chiropody will be held for reciprocity and examination on June 16-17, 1957 at the Jefferson Building in Jefferson City, Mo. **Board Secretary:** Dr. L. A. Hansen, 800 Professional Bldg., Kansas City, Mo.

New Hampshire
The New Hampshire Board of Registration in Chiropody. **Board Secretary:** John S. Wheeler, M.D., 107 State House, Concord, N. H.

New Mexico
The next board meeting of the New Mexico State Board of Chiropody will be held for reciprocity (upon application) and examination on July 13-14, 1957 in Albuquerque, N. M. **Board Secretary:** Morris Haas, D.S.C., 1301 Central Ave., East, Albuquerque, N. M.

North Carolina
The North Carolina State Board of Chiropody Examiners. **Board Secretary:** Dr. Charles Darby, P. O. Box 55, Statesville, N. C.

North Dakota
The next board meeting of the North Dakota Board of Registration in Chiropody will be held for reciprocity and examination on April 21, 1957, at 611 First Ave., No., Fargo, No. Dak. **Board Secretary:** Dr. E. B. Snuff, 611 First Ave., No., Fargo, No. Dak.

Oklahoma
The Oklahoma State Board of Chiropody. **Board Secretary:** Dr. Warren D. Long, 1217 No. Walker St., Oklahoma City, Okla.

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The Texas State Board of Chiropody Examiners will hold its next meeting on January 25, 26, and 27 in Beaumont, Texas. **Board Secretary:** Dr. Lewis M. Hoppock, P.O. Box 3315, Temple, Texas.

Utah
The next board meeting of the Utah State Board of Chiropody Examiners will be held for examination in July 1957 at the State Capitol in Salt Lake City, Utah. **Board Secretary:** Dr. A. Bowden, First Security Bank Bldg., Provo, Utah.

West Virginia
The next board meeting of the Medical Licensing Board of West Virginia will be held for examination in January 1957 at the State Office Building in Charleston, W. Va. **Board Secretary:** N. H. Dyer, M.D., State Office Building, Charleston, W. Va.

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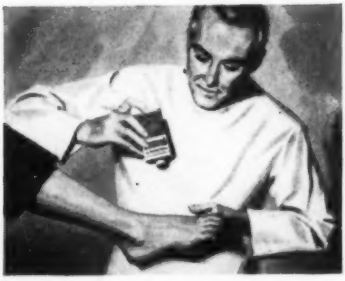

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BALANCE AND IMBALANCE*

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IT IS THE PURPOSE of this paper to present in detailed outline some considerations of the forces dealing with balance and imbalance in the body with particular reference to the foot. The conclusions reached may be employed as a basis upon which foot therapy may be predicated.

Structure and Function

Structure and function are interdependent. Function is limited by the mechanical factors in the structure in that a part cannot do more than the structures will permit. However, they may do less which may result in impaired function or activity. Over a period of time function, or the lack of it, can alter structure. In a relatively shorter period of time, and very often almost immediately, changes in structure can alter function.

The principle that function makes form without considering the effect of structure upon function must lead its adherents to improper conclusions. To those who insist that function alters structure and therefore precedes it, one can only point to the fact that before there can be function a structure must exist with inherent properties for performing such functions. There is no denying that function has an effect upon structure, but there is a balance established between the two so that optimum performance may ensue. This implies that the structures of any part, and of all parts of a system, must be undisturbed in their normal relations with one another. Function in order to be considered normal must take place within the means provided by the form of the structures and their relationships.

Structures may be normal or abnormal within themselves or in their relationships one to another. Function (in most cases) will continue whether the structures are normal or not. Normal structures will permit for normal function but this does not preclude abnormal function from taking place. Abnormal structure will not permit the same function prescribed by normal structure, however, such function as the abnormal structure will allow may be normal within the new limits arrived at, or may be abnormal. In the former, function is adequate; in the latter inadequate.

The interdependency between structure and function is a balanced relationship in normalcy. As long as a balance is maintained,

*Honorable Mention 1956 Wm. J. Stickel Annual Awards for Research in Chiropody.

function takes place without the production of symptoms.

Balance

Any structure in order to function at maximum efficiency must be in perfect equilibrium at all times. The farther the structure strays from this state, the greater will be the stress placed on its parts until a point is reached where balance is completely upset and the structure collapses.

Equilibrium means a balancing of forces. Perfect equilibrium implies complete neutralization of opposing forces and can be best accomplished and maintained in the body by passive forces, without the use of muscular activity. When muscular action is required to maintain equilibrium, fatigue and strain often ensue. Perfect equilibrium is rarely found in the erect human. It exists in the completely supine or prone positions.

When the body is thrown out of equilibrium there is a tendency on its part to restore this state. If this cannot be accomplished, the play of forces results in motion in various planes. In order to re-establish an equilibrium, counter forces must be activated. If these counter forces include continuous muscular activity or ligamentous strain in order to maintain equilibrium, there results an interference with normal function, and waste to the economy of the body. If maximum efficiency is to be obtained, balance of the body structure is imperative.

"The balance of the human body, or its parts, requires that all gravitational forces (body weight) be completely neutralized by counter forces (resistance of the supporting surface of the body). (Steindler, Kinesiology of the Human Body, Page 101)

It is to be noted that the resistance factor to body weight is the supporting surface of the body and not the muscles or ligaments of the structure itself. If muscles, ligaments, etc., are forced to assume a portion of the burden of balance improperly supplied by the supporting surface, an abnormal situation will exist which will result in stresses and strains . . . and frequently in symptomatology.

"In maintaining a balanced position amidst contending forces, stresses are set up within a structure, the degree of which varies with the position, the weight, and the resistance properties of the several parts. If strain occurs, its degree is proportional to, and varies with, the degree of stress (Hooke's Law). To have a minimum stress, and therefore of strain, within the body, not only must the structure as a whole be in balanced relation with the outside forces, but each part must be in balance with every other part within the system. This means that each part must be properly related to every other, remote as well as adjoining, if true mechanical balance is to obtain." (Todd, The Thinking Body, Page 56.)

When we speak of balance then we speak of two things; one, the structure as a whole which must be in balanced relation with outside forces; and two, each individual unit of the system must be in balanced relation to its adjoining member as well as those immediately and more remotely connected. The first deals with the ability of the body to maintain its upright posture over the supporting surface of the foot. The second deals with the maintenance of equilibrium of individual parts and their movements in the main purposes of their design.

When these two factors are in equilibrium, there is a minimum of stress placed upon the parts and they function with maximum efficiency. When these relationships are disturbed and cannot meet ade-

quately the contending outside forces, then structures within the mechanism must take over to re-establish balance, sometimes to the detriment of function.

This is best illustrated in the curves of the spinal column where an equilibrium has been established between the curves and the center of gravity. If any one of these curves should be increased and not compensated for by the other curvatures, then ligaments and/or muscular action is required to maintain balance with, usually, subsequent dysfunction.

The body as a whole will remain in balance so long as it remains within the limits of the supporting surface, or base of support of the feet. Beyond these limits, the body will tend to fall unless forcibly restrained by its musculature. Within the limits of its supporting base, the body balance may be disturbed to a greater or lesser degree, stress becoming manifest depending upon Hooke's Law.

Thus if the upper portion of the body should be tilted forward or sidewise, the corrective measure may be, and usually is, in the spine itself. If the disturbance in balance is in the hip, the thigh, or the leg, then the foot will have to be placed in a position to preserve or restore balance. This might mean, for instance, that one portion of the foot would have to bear more weight than another, or perhaps that the foot would not be able to transmit weight to the ground evenly over its entire surface. Thus the foot may have restored balance with the body forces, but in doing so, may be thrown out of balance with the outside contending forces of the ground.

Balance of the foot in proper relation with the supporting surface is important in order that the gravitational stresses being transmitted through the foot can be dissipated evenly through the parts which are in contact with the ground. In order to determine whether such a situation exists, a study of the factors of balance of the entire body as well as of the foot must be made. Neglect in considering other factors than those within the foot itself may result in treatment applied to the foot when the fault actually resides higher up.

Stability

The mere fact that a balance exists between the inner structures and the outer contending forces is not sufficient for maximum efficiency unless such balance is stable. In a structure where balance is precarious there is a drain on efficiency and a proneness to stress.

In order that balance be maintained consistently and in the same manner time and time again, the foot must be so constructed and maintained that equilibrium will not easily be disturbed and yet permit of adjustment to uneven surfaces. A broad-based structure and a very narrow-based structure may be in equilibrium but the latter will be more easily upset than the former. Just as structure and function go together, so do balance and stability go together. Stability is necessary to maintain equilibrium, and balance is necessary to maintain stability.

Stability is maintained in stance by the broad base supplied by both feet. In locomotion this base is narrowed to the width of one foot. Any factor which interferes with the stability of the foot, internal or external, will affect balance of the foot. The factors which maintain stability have been adequately recorded by Morton (Human Foot, 1935). Suffice it to say that stability of the foot is essential if equilibrium of the foot is to be maintained and the loss of the properties of balance within the foot will af-

fect its stability. Obviously there must be some leeway in stability . . . some give. The forces passing through the foot vary and differ from step to step and circumstance to circumstance which tend to throw the foot out of balance. However, these are only temporary states and equilibrium is usually quickly restored, this by action of forces within the body itself. The fact that the foot and the body have the ability, and find it necessary at times, to throw themselves out of balance in order to re-establish balance indicates that such actions are within the realm of normalcy. Stress and strain resulting from such temporary imbalances are determined by Hooke's Law. Sudden imbalances beyond the ability of the parts to check result in sprain. If the condition of imbalance becomes a permanent one, then we are dealing with a pathologic state.

Trajectoral Gravitational Forces

There is one further consideration affecting balance and maximum efficiency of foot performance. This is the ability and necessity for the foot to distribute the gravitational forces passing through it in line with the functional axis and the leverage axis of the foot. (See functional axis, leverage axis, Morton, Human Foot, 1935.) These forces must be in the same direction in which the foot is pointing and the body is moving. In order for the foot to remain in stable balance these gravitational forces passing down through the legs and into the foot must travel along predetermined specific pathways through its bones. These trajectoral gravitational pathways are manifest by the trabecular arrangements in accordance with the stresses passing through them.

These trajectoral lines of force do not curve but run in straight lines. Stress at any point in the body is resolved into three principal axes and are at right angles to each other, the shearing coefficients disappearing. (Elftman) Greatest trabecular strength is obtained when the trabeculae are arranged parallel to the principle axes. Compression trajectories must be perpendicular to the joint surface.

Cardinal Reference Planes

The three cardinal reference planes (principal axes) are: (1) Transverse Plane, (2) Sagittal Plane, (3) Frontal Plane.

1. *Transverse Plane:* This plane divides the body into an upper and lower portion by a line drawn horizontally through the body. The plane of movement of the body is up and down. The movements which are said to take place in forefoot imbalance are in this plane.

2. *Sagittal Plane:* This divides the body into two equal halves by a plane drawn through the center of the body from forward aft; a right and left half being formed. Movement in this plane is forward and back, as when one leans forward or backward.

3. *Frontal Plane:* This divides the body into two equal halves by a plane drawn through the center of the body from side to side; an anterior and posterior half. Movement in this plane is from side to side as when one leans to the right or to the left.

Perfect equilibrium in the body would ensue if the center of gravity of the body passed through the center of all three cardinal planes of reference. These planes of reference are applicable to the foot, and equilibrium can only be maintained when the gravitational forces are kept within these planes.

The trabecular trajectories in accordance with gravitational stresses have been established. (Steindler,

Kinesiology, Page 378) These trajectoral pathways must be in line with the functional and leverage axes of the foot.

Since the foot is an instrument of support as well as of weight transmission, one must expect the inner texture of its bones, the trabecular structure, to reflect the arrangements and distribution of its mechanical stresses. And this they do. In order for these stresses to be in balance, they must be equally divided in the foot. The foot has been divided by Morton into an inner and outer half by an axis of balance. Weight distribution in each half is equal. The axis of balance is a line "which runs from the center of the heel forward between metatarsals two and three. A vertical plane erected from the axis of balance coincides with the center of weight transmission upon the talus and thereby represents a functional division of the foot marking its structural stability in lateral directions." (Morton, Human foot, 1935 Page 109)

In effect this axis of balance is the dividing line between the inner and outer arches of the foot.

The trabecular trajectoral lines according to Steindler are as follows. The outer arch: The stress lines go from the os calcis to the cuboid forward to metatarsals 4 and 5 and on into the toes. The concentration of the trabecular system is at the roof of the body of the os calcis. The inner arch: The trajectories rise from the os calcis to the center of the body of the talus where they meet at right angles the trabecular system of the tibia. They then go forward in an unbroken line through the neck and head of the talus, through the scaphoid, forward through the three cuneiforms and metatarsals 1, 2, 3, and on through the toes.

This coincides with Morton's axis of balance since the point of concentration is at the astragalus head directly beneath the tibia which is the central point of radiation of the stresses into the foot from which point they divide into the inner and outer arches meeting at a central point in the heel and passing through the five metatarsals in which the weight of the body is equally divided.

This axis of balance divides every foot into two equally balanced halves. It follows then that in every foot, if it is to be in balance, the mechanical stresses, or the gravitational forces being transmitted through the foot, should pass in equilibrium on both sides of the axis of balance.

Since the trabecular trajectories reflect the distribution of the mechanical stresses, these too should pass on both sides of the axis of balance.

These trabecular trajectories may be drawn and therefore demonstrated on the bones depicted on a roentgenogram of a dorso-plantar view of the foot on weight-bearing (Gamble technique). The point at the center of the heel and the center of the head of the talus can be determined and marked. A line through these two points drawn forward between metatarsals 2 and 3 would demonstrate the axis of balance. Since the metatarsals are long bones, the mechanical stresses pass through them in one direction, straight ahead, thus a line drawn through each metatarsal would correspond with the trajectoral gravitational stress through each. Therefore a line drawn through each metatarsal and carried back through the foot upon the roentgenogram should pass, as previously designated, on each side of the axis of balance. If these trajectoral lines pass too near or cross over the line of the axis of

balance from either side, there exists a disturbance of balance in the frontal plane in this foot.

Incidentally, these trajectoral lines will also indicate, since they represent stresses which are only transmitted in straight lines, whether there is a break in the pattern of the bony structures of the inner and outer arches.

The Normal Foot

We have established the fact that maximum efficiency depends upon equilibrium or balance of the body and its individual parts; upon stability; and upon proper transmission of the gravitational forces through the foot to the ground. These factors then determine function and in turn what normal function should be.

The normal foot is one which maintains equilibrium upon weight-bearing, maintains stability, and in which there is normal bone alignment.

"The normal alignment of the different joints of the foot represents the stable physiologic equilibrium in which the function of all structures entrusted with the maintenance of this equilibrium is unimpaired." (Steindler, Kinesiology, Page 402)

The definition of the normal foot implies that such a foot is able to maintain the body above it within the confines of its base of support. It signifies that the intrinsic structure of the foot is so formed and aligned as to remain in equilibrium with the body above it and the supporting surface with which it is or is likely to come in contact. It implies freedom of motion within the limits of the individual joint and combined joint action. It implies ligamentous attachments, muscular action, and bone formation necessary to maintain equilibrium and stability within the confines of the various functions and activities of the foot.

When is the foot in balance? For practical purposes, since perfect equilibrium is inconstant in the body, the foot is in balance when:

1. The structures above it are in equilibrium with the foot without undue stress (insufficient to produce symptoms) upon the supportive tissue of these structures, and when this established equilibrium between the body and the foot has not altered the balance between the foot and its supporting surface.
2. The intrinsic structures of the foot are in equilibrium with the supporting surface so that the gravitational forces can be transmitted to the ground evenly throughout all the structures supplied for this purpose.
3. The trajectoral gravitational forces pass through the foot in the three principal axes of the body and in proper relation to the axis of balance of the foot.

Under these circumstances the requirements of foot balance are met, for then the gravitational forces can pass evenly through the foot and be completely neutralized by the counter forces represented in the resistance of the supporting surface.

Imbalance

A foot may be considered in imbalance:

1. When it cannot maintain equilibrium with the body structures above it.
2. When if such equilibrium is established, it cannot maintain equilibrium with its supporting surface.
3. When it is not in equilibrium with the body above it, nor with its supporting surface.
4. When the gravitational stresses passing through the foot cannot be resolved in any one of

the three principal axes of the body.

5. When the trajectoral gravitational forces do not fall in proper relation to the axis of balance of the foot.

The forces which tend to upset equilibrium may be applied in the three different planes of the body; the cardinal planes of reference. The foot may become imbalanced in one or more of these planes.

Imbalance in the Transverse Plane

For the gravitational stresses to be evenly distributed from the supporting base to the supporting surface, both must be on a horizontal plane. If either one is not, or if both are at an angle, then weight cannot be transmitted evenly through the structures. Therefore imbalance occurs when the relation between foot and supporting surface is not on a transverse plane.

When walking barefoot on uneven surfaces, the constant play between balance and imbalance is essential. For this reason the foot is not a motionless, static structure. Thus it is essential that the foot have within it the innate ability to become imbalanced in order to adjust itself to external conditions just as the spine has the ability to, say, prevent the body from falling backward by throwing the body weight forward. Therefore when a foot must be so adjustable particularly when, for instance, it is walking unshod on a rocky surface where each of its metatarsals must seek an individual level, who is to say with certainty what static position such a foot should assume? It would be intensely interesting to determine how such continued function (rocky surfaces) would alter the foot structure.

Upon straight surfaces such as pavement and modern footgear (disregarding molded footgear and the foot impression made upon the insole of the conventional shoe . . . and such should not be disregarded) the maintenance of balance in the transverse plane is a necessity.

If the walking surface is horizontal and the foot is not maintained on a transverse plane, balance is disturbed. If the foot is locked in any but a transverse plane (talipes) the symptoms produced are the result only of increased stress on the ground contact points (hyperkeratosis). If the imbalance with the ground results from an attempt of the foot to maintain a balanced relation with the structure above it, one of two results may ensue. Firstly, the foot may maintain its balanced relation with the body and therefore the balance with the ground remains disturbed. Stress in the foot will manifest itself in improper weight distribution to the ground (hyperkeratosis), and an attempt to obtain stability and overcome the imbalance by contending forces in the foot (muscular fatigue and ligamentous strain). Or secondly, the foot cannot or will not maintain its balanced relation to the body but seek to establish its balance with the walking surface. If it can do so completely, no stress in the foot is created and there will be no stress or strain. If it can only do so partially, strain and weight stresses will result. Since, too, the imbalance between the foot and the body remains extant, there will also be strain on body structures which will have been endeavoring to restore balance above the foot. Thus leg fatigue and strain may result as well as symptoms higher up.

In dealing with a normal foot which is unbalanced because of the structural imbalance of the body above it, such a foot may establish contact with the ground despite any torsion produced in its joints . . . provided the torsion is within

the normal limit of joint motion.

"Torsion is produced by two couples of forces acting in parallel planes at right angles to the axis of the bone and working in opposite directions. If the forces are not in parallel planes at right angles to the axis of the bone, the torsion effect is combined with the mechanical stresses such as tension and compression. Torsion stresses often lead to failure if the torsion stress cannot be resolved in visible motion. If no visible motion exists, strain occurs at the point of juncture." (Steindler, Kinesiology, Page 15)

The torsion necessary for the foot imbalanced in the transverse plane to reach a horizontal position takes place and falls within the normal limits of motion permitted at the mid-tarsal joint.

It is conceivable that the forepart of the foot may be in imbalance in the transverse plane as the result of abnormal angulation of the transverse arch (metatarsal bases). Horizontal balance would be restored by motion at the mid-tarsal joint. Whether in the process of re-establishment of balance with the supporting surface symptoms of stress and strain are produced appears to this writer to be debatable.

Another possible cause of forefoot imbalance may be the position of the calcaneus. If this bone is maintained, at rest, in a position of mild eversion or inversion, then the forefoot, also at rest, may appear to be in a position of imbalance. If upon weight-bearing such relationships are not changed, then imbalance of the forefoot would result. If, however, the subastragaloid joint is not locked, the forefoot would fall into normal relationship provided no other joints prevented such action. If, as with pronation, eversion of the os calcis takes place the normal transverse plane is not disturbed because contrary to belief that abduction of the forefoot with pronation takes place, in reality there is what Steindler terms "compensatory supination" which maintains the foot in equilibrium. (Steindler, Post Graduate Lectures on Orthopedic Diagnosis and Indications, Vol. II, 1952)

Imbalance in the Sagittal Plane

Imbalance in the foot in the sagittal plane seldom occurs because of the flexibility of the spinal column in balancing out deformities which would place body weight either forward or backward of the line of the center of gravity of the body. In most individuals no matter what the deformity, the line of gravity remains close to where it should be for balance. In an individual suffering wtih spondylolisthesis where the trunk leans so far forward over the feet, excessive weight must be placed on the forepart of the foot.

Imbalance in the Frontal Plane

This phase of foot imbalance has received little consideration, its effects sadly neglected, and treatment based on such imbalance almost completely ignored.

This type of imbalance occurs when the weight stresses are thrown to either the inner side or the outer side of the axis of balance of the foot. This is true whether the foot be balanced in the transverse plane or not, or whether it be in balance with the body above it or not. The cause for such imbalance may reside outside the foot or occur within the foot itself . . . or be present in both.

Alterations in the hip, the femur, or in the tibia which place the center of gravity for the foot outside or inside the axis of balance may produce imbalance in the

frontal plane. Increased angulation of the femur, severe bowleggedness or knock-knees, abnormal angulation of the tibia in relation to the foot will result in disalignment of the center of gravity in the limb involved. Excess weight placed on either side of the axis of balance will result in increased mechanical stresses in that area.

Frontal imbalance occurs from abnormal forces within the foot. This would occur when the trajectoral gravitational forces are not balanced on either side of the axis of balance. This, as has been shown, can be demonstrated by means of trajectories drawn directly upon a weight-bearing type of roentgenogram taken according to the Gamble technique. As an example, severe pronation in the foot would place the trajectoral lines on the medial side of the axis of balance whereas a metatarsus varus would place them on the lateral side. Other pathologic considerations, and they are numerous, either in the malposition of bones, or their malalignment, will disturb this plane of balance.

In the consideration of foot imbalance in any of the above planes, it must be remembered that such imbalance may be present in more than one of the cardinal planes of reference at one time.

Summary

1. Form and structure are interdependent.
2. This interdependency, for maximum efficiency, must be in equilibrium of forces both within and without the body.
3. Besides equilibrium, there must be stability so that balance can be maintained.
4. Equilibrium requires that all gravitational forces be completely neutralized by counter forces.
5. Balance and stability also depend upon the ability of the foot to distribute the gravitational forces in line with the leverage and functional axes of the foot.
6. The gravitational stresses are resolved into three principle axes, the cardinal planes of reference which are: (1) Transverse Plane, (2) Sagittal Plane, and (3) Frontal Plane.
7. The normal foot is one which maintains equilibrium upon weight-bearing in these three principal planes; one which is capable of continuing such equilibrium because it is stable, and in which there is normal bone alignment.
8. A foot is in balance when the structures above it are in balance with the foot, and between foot and the supporting surface. When the trajectoral gravitational forces pass through the foot in the three principal axes of the body in proper relation to the axis of balance of the foot.
9. Foot imbalance occurs when such relations are disturbed.

Conclusions

1. In order to diagnose and treat the foot, body equilibrium and the study of the forces of balance must be considered in relation to the cardinal planes of reference of the body.
2. They must also include a consideration of the factors of stability in the foot.
3. Maintenance of foot balance, and restoration from imbalance must include a study of the spinal cord as well as that of the entire lower extremity.
4. The fact that more than one plane of reference may be involved in the foot must be constantly considered.
5. Treatment must be aimed at restoring foot balance without disturbing the balance of the struc-

(Continued on Page 848)

OSCILLOGRAPHIC INTERPRETATIONS

HAROLD M. GOLDY, D.S.C.
Paterson, N. J.

Guide to Vascular Insufficiencies of the Foot and Leg

IN RECENT years the chiropody profession has progressed in many directions both therapeutically and diagnostically. Twenty years ago an X-ray machine in an office of a chiropodist was a rarity. Today it is considered standard equipment. Today's chiropodist is interested not only in the local complaint of the patient, but in the relationship of all possible systemic disorders as the etiological contributing or coexisting factor. The thorough examination must include orthopedic, dermatological, neurological and vascular evaluation with assistance provided by X-ray and laboratory studies.

Unfortunately most physical examinations do not include a thorough examination of the feet and legs. In fact, eighty per cent of the people who undergo medical examinations do not have their shoes and stockings removed. The chiropodist, therefore, is in an excellent position to make the initial diagnosis and may be thus instrumental in saving the life or limb of the patient.

Circulatory disturbances are vital for thorough study by chiropodists for many reasons. From a medicolegal point of view, most of the chiropodists' problems develop in patients where their pathology was unrecognized and treatment applied which in a patient with normal circulation would have presented no complication, but in the others may result in severe infection and gangrene. A common complaint in circulatory disturbances of the feet is pain in the first toe. This may appear on the surface to be caused by a calloused nail groove. Simple aseptic removal may result in serious complications. It has been noted often that patients with mechanical disturbances will complain of discomfort in the legs and thighs. Circulatory disturbances may produce the same complaints. Only an adequate evaluation may reveal the causative factor. The patient with a mechanical disturbance may also have occlusive vascular disease, and it is important that both conditions receive proper attention.

Peripheral circulatory diseases must be differentiated from systemic diseases. Patients with neurological disease, carcinoma, anemias, etc., may have complaints in the legs and feet which on cursory examination may seem to be due to a disorder of circulation or a mechanical disturbance.

Many patients have had a diagnosis made of poor circulation or have made their own diagnosis on the basis of cold feet. Only thorough examination can evaluate this complaint and determine whether we are dealing with a functional or organic problem.

The patient who gives a definite history of occlusive vascular disease of several years duration, who has had medical care, and who is now asymptomatic should have, and frequently desires, re-evaluation of his circulatory status. The chiropodist is frequently called on to administer prophylactic foot care in these patients and look for signs of regression of their vascular status.

When a diagnosis of occlusive vascular disease has been made a thorough cardiovascular work-up is always indicated. Diabetes and cardiac pathology must be ruled out by the physician and it is our

obligation to provide routine prophylactic foot care to these patients.

In the past, too little attention has been given the ordinary symptoms of the feet pertaining to circulation. These symptoms may be vague, atypical or simulate a simple arch disturbance. The classical signs and symptoms of advanced circulatory pathology are obvious and easily recognized. Many symptoms may be overlooked or misdiagnosed, particularly when the chief complaint may be only a painful heloma durum or onychocryptosis. A routine vascular examination of the feet is always indicated for all foot complaints. There are numerous methods for examination of the circulation. It is the purpose of this paper to present an apparatus for aid in diagnosis and evaluation of these problems that is superior to anything we have in our diagnostic armamentarium – namely, the oscillograph.

The oscillograph is a mechanical apparatus which transduces pneumatic pad pressure fluctuations into stylus deflections and by this means records these fluctuations with precision and accuracy. It is comprised of two separate pneumatic systems, each of which can be used independently and each of which has its own stylus. The styli of both systems record in ink on a single steadily moving paper graph, which is driven at a constant speed by means of a chronometer movement. The chronometer can, within certain limits, be adjusted for various speeds. The motivating principle of the pressure transducer is a highly sensitive expansion capsule situated in an individual airtight compartment—two such capsules and compartments being provided, one for each system.

Recordings can be carried out at any convenient pressure, which pressure can be regulated by an easily operated valve mechanism to any desired value. The pressure at which the recording is being made is indicated on an aneroid manometer which is an integral part of the apparatus.

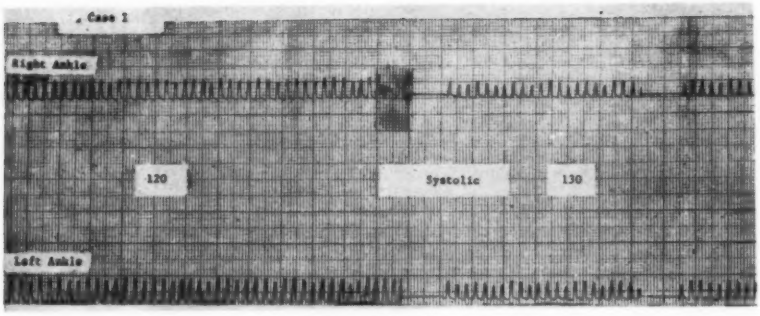
A simple switch valve integrates the two systems for calibration so that the user may calibrate easily with both systems being under identical conditions. However, before recording, merely changing the positions of this same switch valve, isolates the systems into two independent units.

The embodiment of two separate measuring systems into one apparatus makes it possible for the oscillograph to be used for comparative examinations. By virtue of its instantaneous recording feature the apparatus operates economically, while at the same time providing a convenient two channel documentary proof not available from any other apparatus.

The oscillograph combines in itself two great advantages:

(1) It measures and records the oscillations of two like extremities simultaneously (i.e., either both arms, both legs, etc.). On a one channel recording system or on nonrecording one channel systems it was not possible to compare the values of the various extremities recorded or observed nonsimultaneously. Back pressure, altered circulatory regulation, and different body conditions may have existed at the two different times in which the recordings or observations were made of the two extremities. All these sources of error are eliminated with the oscillograph's simultaneous two channel system.

(2) The oscillations are recorded on graph paper and are always accessible for evaluation and



CASE NO. I

comparison with other measurements taken at a later date. The unreliable results obtained in reading the rapidly fluctuating indicator of a nonrecording instrument are eliminated.

Since the chiropodist is deeply interested in systemic disturbances which may affect the feet and legs, and yet usually does not use the stethoscope in his examination, the sphygmomanometer and electrocardiographic machines, or thoracic fluoroscopy and radiography, studies of oscillographic tracings may reveal the possibility of a central cardiovascular disturbance and enable the patient to be referred for medical treatment and evaluation. No other diagnostic instrument gives the chiropodist the opportunity to obtain this data while confining his examination to the lower extremities.

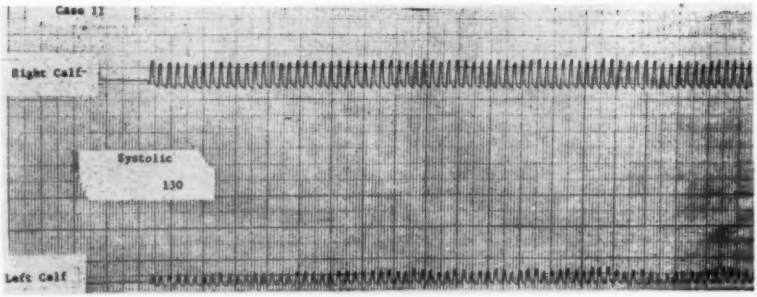
The use of oscillometry and oscillography in chiropody practice can be compared to the use of fluoroscopy and X-ray. We frequently take X-rays, study them intensively and correlate them with other clinical findings before arriving at a diagnosis. The same can be done with an oscillograph. With fluoroscopy and oscillometry, we can only record what we remember seeing and frequently overlook important indications of pathology.

In cases involving accidents where the circulation has been impaired, or where there is a coexistent circulatory disturbance, the oscillograph may be important medio-legal visual evidence, revealing the full vascular status and entered into the court records as is now done with X-rays.

I can foresee eventually study groups in which the men will discuss oscillographs and their interpretations as is now being done with electrocardiograms and radiographs. Clinically it has been proven that despite the many medications that have been utilized for years to improve circulation, none has proven to be of solution or even partial solution to peripheral vascular disease. In my experience patients who have received conservative care (cessation of smoking, alcohol by mouth, Buerger's exercises, heat to the back, prophylactic foot care, etc.) have done as well as those who were on all types of medication.

The following oscillographs will clearly illustrate existing pathology in the abnormal graphs, and show how they become part of a permanent office record.

Case No. I. Mrs. Z. Age 31. Patient had orthopedic complaints with associated numbness, burning of the metatarsal area and cold



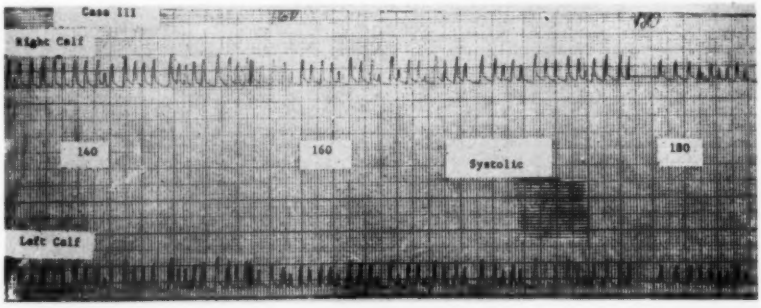
CASE NO. II

feet. Oscillograph is completely normal and symptoms were not on an occlusive vascular basis.

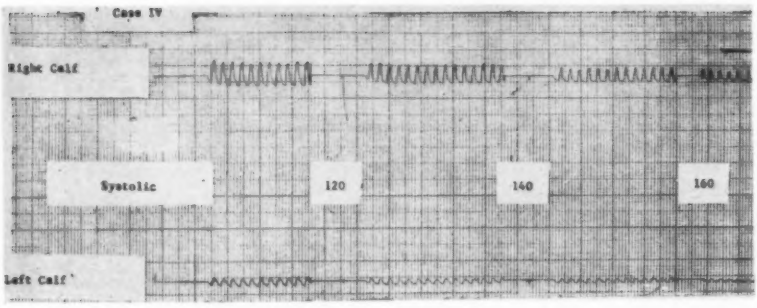
Case No. II. Mr. K. Age 52. Thromboangiitis obliterans for past ten years. Patient had severe involvement of the left lower foot, leg and thigh. He has stopped his previously heavy smoking since his diagnosis was made ten years ago. Clinically he has shown marked improvement although there is still decreased circulation of the left leg. He has been under close personal observation for prophylactic foot care and we have noted the return of formerly absent pulses on the left foot, although they are still more feeble than the right foot. The oscillograph clearly points out the involved leg.

Case No. III. Mr. R. S. Age 28. Atypical symptoms in both lower extremities which could have been on an orthopedic, neurological or vascular basis. The oscillograph points out the arrhythmia with variation in amplitude, although these readings, as evaluated with an oscillometer, would be considered normal from a standpoint of normal circulation. This patient was referred for medical consultation and the diagnosis was rheumatic heart disease. Study of the oscillograph indicated the possibility of the presence of cardiac pathology. If an oscillometer alone had been used, the circulatory status would probably have been considered excellent on the basis of the good readings.

Case No. IV. Mrs. B. Age 65. History of mild diabetes. Chief



CASE NO. III



CASE NO. IV

complaint was an infected nail of the left first toe. History disclosed typical complaints of occlusive vascular disease of the lower extremities, more severe on the left leg (night cramps in calves of legs, paresthesias, intermittent claudication). Conservative treatment, because of the deficient circulation, produced a good clinical result with the infection. The oscillograph clearly shows the impaired circulation of the left leg.

Numerous additional clinically interesting cases could have been presented. However, space does not permit their inclusion in this paper. The writer expects to do an additional paper in the near future with the entire paper based on oscillographic pathology and an accompanying clinical discussion of each case. The cases listed in this paper were selected because each could be typical of an average patient with foot complaints.

Comment

This paper has presented a diagnostic instrument to the chiropody profession of great aid in the diagnosis and evaluation of peripheral vascular diseases. It has emphasized the importance of a thorough examination of all patients with foot complaints to determine whether the complaint is of local or systemic origin, or whether in a local complaint there is present a coexistent systemic disturbance with special emphasis on peripheral vascular disease. One of the well-recognized tendencies of specialty medicine has been the rather strict manner in which attention has been focused on the very narrow aspects of the individual field. Chiropody has done this with almost complete emphasis being placed on mechanical disturbances. Our aim should be to overcome this deficiency by developing an integrated approach that takes into consideration the complete health picture of the patient. The foot and leg mirror the state of many pathological entities. The chiropodist cannot discharge his obligation intelligently unless he looks beyond the confines of his special interest. The oscillograph will aid us to do this.

113 Broadway

References

1. Propper Manufacturing Co., Inc., 10-34 44th Drive, Long Island, N. Y.

REPORT OF BUSINESS ADMINISTRATOR*

FRANKLIN R. FIELDING, B.S., B.S.A., M.F.
Washington, D. C.

CONSIDERING my short time with your Association, and the comparatively meagre opportunity I have had to learn the details of the present status of chiropody-podiatry in a multitude of fields, it would be presumptuous of me to indicate any degree of accomplishment beyond a mere start, in relation to my job. I shall try to give you a clear picture of recent activity and a forecast of the road ahead.

In the performance of my job, I can be said to be wearing four hats:

1. Business Administrator
   a. Headquarters Management.
   b. Treasury Functions
   c. Supervision of Insurance Services
   d. Business Management of Journal and Directory and the Annual National Convention
2. Coordinator of Professional Development
   a. Federal Affairs Liaison
   b. Non-Federal Groups Liaison
   c. Fostering of Academic Interests
   d. Research Subsidization
3. Director of Public Relations
   a. Press, Radio and TV
   b. Liasion with Other Professions
   c. Promotional Literature, Films, etc.
4. Director of Internal Liaison
   a. American Foot Health Foundation
   b. Liaison with Chiropody-Podiatry Colleges, Regional Conventions, State Societies, Individual Practitioners

Time will not permit my dwelling upon each one of these projects. You wouldn't sit still for it anyway. So I will touch but briefly on those items I feel are of greatest immediate importance to you.

None of the actions developed by reason of these functional requirements will be unilateral and independent. In the determination of policies, in every field, your standing committees will still make recommendations, as to needs and goals, to the House of Delegates, which will thereupon establish its objectives by your Executive Council, through continuous liaison with the chairmen of the various committees. My function will not be, in any case, to formulate or impose policy, but to advise during its development and see to its execution after final determination.

I will touch briefly on the functional subdivisions of the principal fields of activity, putting emphasis on those which have dominated my first few months with you, where some evidences of results have been observed, and promises for the future are indicated. And so we come to the first general division:

I. Business Administrator

In the general or over-all nominal activities incident to business administration, standard practices of good office management and sound economic policies are being followed. There are no innovations planned.

Present accountant and legal counsel arrangements assure the accuracy of the recording of the receipt and control of funds, while centralizing responsibility for outgo helps stabilize financial security and conservation. I, as Treasurer, have that responsibility under usual bonding procedure.

Budgets, as authorized by the

*Presented at the 1956 House of Delegates, Chicago, Ill.

House of Delegates, will be rigidly adhered to. Close liaison is maintained with our insurance counsel in the interests of the membership. The speediest possible service is given our members in all matters pertaining to malpractice or other action.

Closer contact with state organizations will be sought to identify and bring into the Association all practitioners who are eligible for membership. In that we will need the constant help of the state societies.

Planning is already under way to publish a new Directory about May 1st, 1957. Space sales solicitation will start shortly, and the membership list will be of those whose dues were paid up to March 1, 1957. We believe that revenue from this advertising medium can be considerably increased, by making changes in the format. The objective here is to increase highly salable advertising space—and income. We are already busy promoting exhibitor and other interest in our 1957 convention. If careful planning and persistent effort can do it, a healthy increase in exhibitor revenue and greatly increased member attendance will swell our "take" substantially.

II. Coordination of Professional Development

This phase of responsibility will demand a major part of my time. It affects every aspect of your profession and its advancement. It is sure to greatly influence the ultimate economic level attained by the practitioner, and the maintenance of his proper niche in the National life.

Prominent among the forces which have great impact on our profession are those which develop in our federal agencies. Programs of great significance to chiropodist advancement are in current development with several of these agencies. I cannot detail for you, here, a blow-by-blow story of all the rewarding contacts we continue to have with those departments of the federal government, but I cannot forbear the mention of a few which have already borne fruit:

First is the final recognition of our profession by the Army. You all know of the long and tenacious fight made by our committees and dedicated individuals. I bring this to your notice more as a reporter than as a participant or negotiator, though I was happy to be in at the kill. In early August the Office of the Assistant Secretary of Defense (Manpower) advised us that they would shortly commission a number of chiropodists, limited at present to nine, thereby falling into line with Air Force and Navy. This followed recent conferences of Dr. Rubin and others with the Surgeons General of the services, the Assistant Secretaries of Defense (Manpower and Medical Services) and some friends on Secretary Wilson's staff, but the final decisions were unquestionably sparked by the persistent and effective pressure exerted on the Department by Dr. Rubin in the last six to eight months. In many of these contacts, Dr. Rubin was ably back-stopped by Dr. Lawrence, our Medical Consultant, and the result was complete success. This is a heartening accomplishment which must be a matter of great satisfaction to all of you.

Many of you have read the splendid reports of Dr. Turchin, Chairman of the Federal Affairs Committee, which were published in the April issue of the JOURNAL. He, and an Executive Council member, Dr. Alec Levin—both of the District of Columbia Podiatry Society, have given us highly effective assistance.

Two educators, probably the foremost authorities of the nation

on guidance and pre-professional training, agreed to go to our convention and advise with our Council on Education and college authorities, on ways and means of strengthening our recruitment efforts. Admittedly, the life of our profession can almost be said to depend upon our degree of success in this field. Help from Mr. Royce Brewster, Chief Specialist in Guidance in the U. S. Office of Education, and Dr. James McCaskill, Director of Federal Affairs, National Education Association, will not stop with this visit they had with us. They will help us with the development of proper materials for the stimulation of interest in our profession, among high school and junior college youth. They will also make available to us their avenues of access to the 28 thousand guidance counsellors who are in close contact with the millions of such students. The cost of an independent effort to reach this audience would be far beyond our means, so this aid from these old associates is noteworthy and very welcome. Appropriate materials are now in preparation to capitalize on this magnificent opportunity.

Conferences have been held with the members of the staff of the U. S. Office of Education who carry responsibility for all phases of Higher Education, including Assistant Commissioner for Higher Education, Dr. Lloyd E. Blauch. At one meeting Dr. Rubin brought out the fact that such sections of the medical arts as osteopathy, nursing, pharmacy and optometry, each had its proper place in a U. S. Office of Education report on degrees conferred by institutions of higher education. However, statistics concerning our colleges appeared in the so-called "N. E. C." section (Not Elsewhere Classified). Here we were linked with various cults. To us this is like a fond mother finding her daughter's wedding reported, not in a three-column spread with picture, on the society page, but back with the classified ads or the comics. We have been assured by Director Conrad that the next issue, and any other like publication, will carry information on chiropody-podiatry colleges under our proper designation in the healing arts. It is certain that the Division of Higher Education is now thoroughly convinced as to the validity of our "doctor" degree. That was "Step I" in our bid for recognition.

Many similar clarifying conferences have been held with various branches of the Office of Education concerned with guidance, visual education, etc.

Much work is under way with other agencies, as noted in the Turchin reports, and all of the gains to date are being consolidated.

Dr. Lawrence looks after our interests in any proposed legislative action, and follows closely the day-to-day action of committees discussing any action basic to chiropody, while congress is in session.

Programs designed to advance the cause of chiropody, with non-federal groups of national importance also, are well advanced. Some of you know of our current work with the National Education Association through Dr. Jim McCaskill's talks with our Council on Education and other groups at this meeting.

The very troublesome and financially disadvantageous hassle with which we are confronted in our relationships with Blue Shield-Blue Cross presents a problem which, at present, precludes solution by the National office. Your Executive Council is in negotiation with those in control of that major prepaid insurance group "At the Sum-

mit," so we in Washington will sit tight and avoid rocking the boat. The D. C. Podiatry Society spectacularly won its fight with Blue Cross-Blue Shield, at a cost to them of about $20,000, and its methods will be copied elsewhere.

Based on the spectacular success of Chairman Jim Conforti of the Labor Committee, with the Akron, Ohio local of The United Rubber, Cork, Linoleum and Plastic Workers of America, we now have plans in preparation for, and have had preliminary conversations with, the pension and insurance departments of several large union organizations. We hope to have clauses in their basic contracts with the great commercial carriers providing their members adequate coverage, which will insure chiropodists the right to be paid on the same basis as physicians of medicine. It will take time, but development of this local action until it covers the United States will be a major project of the National office. The study and development of material concerning industrial chiropody—statistics, brochures, research in regard to man-hour losses and other factors, indicating the importance of chiropodical care to management — will be explored fully in relation to the potential expansion of this activity.

Practitioners everywhere recognize the great importance of full recognition of the chiropodists by the hospitals, public and private, federally, state or group operated. Now that Army has fallen in line with Navy and Air Force in acknowledgment of our complete right to full recognition in the medical field, our progress toward full partnership in hospital operation should rapidly advance.

It was quickly apparent to me that the functions most vital to the advancement, if not life itself, of chiropody revolve about its educative core. Its schools must recruit a flow of students large enough to test their capacities. Those capacities must be continually expanded. Academic requirements must be raised to the limit of its teaching potential in a consistently improving plant, conducive to the turning out of an ever-improving finished product. Our schools have made, since World War II, tremendous strides forward in professional attainments. You have come a long way because your Council on Education has demanded and has increasingly obtained observance, in recent years, of these improved standards.

Industry demands — and gets — more and better engineers and management personnel—and pays them accordingly. That doesn't "just happen." It is planned and worked for intelligently and without letup in every level of the academic process. This must be true for every level of our curriculum, starting with particular emphasis on getting recruits with high professional potential. That is our top target.

Chiropody education needs better physical plant, more money for its academic requirements and—above everything else—more students of top grade mentality, with a strong yen for the healing arts. Failure to recruit an increasing number will mean that your profession will not survive much beyond the lives of its present practitioners. Here, the work of your Council on Education is important beyond measurement.

As liaison for the Secretary of the Navy to the U. S. Commissioner of Education from 1943 to war's end, I visited most of the principal college campus plants in the United States. Therefore, when I took on this job, my first move was to visit five of our six colleges and make

my appraisals of them, as to physical plant, with a knowledgeable background. I will make no comparisons of one with the other or of them as a group with any other group, except to say that I marvelled at the educational job that was being accomplished in the face of considerable difficulties. They merit all the support their alumni can give them.

The effort in guidance must be materially increased, along the lines advocated in their talks to our Council on Education at Chicago, by Messrs. Brewster and McCaskill of the U. S. Office of Education and the National Education Association, respectively. New materials for implementing this are being created. Adjust your thinking to the fact that this lifesaving effort will cost money—lots of it. Our visiting experts left no doubt in the minds of any of their audiences as to that—but you are going to fight and live . . . or drift and sink. It's that simple, and all of it is the concern of each one of you.

I believe the situation as to physical plant can be materially helped at a moderate cost. I am sure our colleges are eligible to receive both real and personal Federal surplus property, under Public Law 152 of 1948, and the prospects will be thoroughly explored. Mr. Dan Musser, Property Coordinator, Department of Health, Education & Welfare, Chicago Regional Office, came to this convention at our invitation and outlined this program to our college authorities. They were greatly impressed, and will unanimously explore its possibilities. The current rate of distribution of personal property to the colleges of the Nation under this Act is about 18 millions of dollars a *month*. Our colleges must seek and get their legitimate share.

The facts of the greatly raised standards and the high academic level of the curricula now maintained at our colleges, are virtually unknown to the lay public. They are not even clearly apparent to national authorities on Higher Education. A prodigious job lies ahead for all of us to change that muddled picture. The lay public has been told a lot about the painstaking training of the medical doctor, a good deal about the dentist, the osteopath and the engineer, and knows almost nothing about the preparation of the chiropodist.

The successful solution of research problems offers the very finest avenue to public recognition of the maturity and professional capacity of the podiatrist-chiropodist. In order that our profession may take its rightful place in the healing arts, a steadily increasing effort in this field must be developed. Obviously, such effort must be financed by grants from private, quasi-public, or public sources, and probably the only feasible location for carrying out this work will be in the postgraduate or faculty resources of our colleges. Right now there are millions of dollars of research, and other grants, available. To prove that they merit these grants, our colleges must first get all their ducks in proper rows. Our Council on Education is alive to the need, and fully determined to help with the accomplishment of that goal. The money is available, and we must prove our right to be trusted with our share of it.

The recent session of the congress saw great progress in the development of bills concerning grants-in-aid to encourage research, stimulate the output of public health experts, provide needed educational and physical facilities, and to take up the financial slack

(Continued on Page 845)

JOURNAL

OF THE

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BY THE NATIONAL ASSOCIATION OF CHIROPODISTS

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A. RUBIN, D.S.C., *Editor*

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Address all communications intended for publication, matter relating to advertising, business or subscriptions to the above address.

PRESIDENT'S MESSAGE

Look Forward

AN ASSOCIATION can become stagnant through the lack of an active pursuit of objectives. We must keep progressive issues alive and work assiduously for their advancement. Little is accomplished by hypercritical attitudes and ultra-conservatism. We should be willing to develop sound old and new ideas in a responsible manner with vigor and a zeal for the future welfare of our profession.

At the beginning of this year's administration, although manifold issues will receive attention, I chose twelve special areas as an agenda for concentrated effort:

1. Activation of the Regional Plan as a means of gaining increased membership, better representation, and a stronger N. A. C. organization.
2. Improvement of the caliber of the N. A. C. JOURNAL with a better format, and increased income from advertising.
3. The production of an N. A. C. Directory this year with substantial income from advertising in the Directory.
4. Improvement in our National Convention to make it better attended through more attractive features, resulting in added income.
5. A program to place *trained* chiropodists in industrial chiropody positions. This is to not only serve the individual chiropodist, but to act as a broad public relations endeavor.
6. A vigorous campaign to gain authority for chiropody under all insurance policies related to disabilities within our scope.
7. Support of our educational institutions by assisting in student recruitment; liaison between our institutions and Federal agencies to improve the status of the profession; expanded research assignments to our colleges.
8. Improvement of our commercial relations through economic survey.

9. Assistance to the individual chiropodist in improving his practice standards.

10. A comprehensive program of medical relations.

11. Complete coverage of the Federal Affairs prospectus.

12. Intensified effort in public information and public relations.

Advancement in this selected plan of action calls for help from all members of the profession. Here is what you can do:

1. Attend your regional convention. Invite a nonmember to join. Meet the N. A. C. representative and express your desires.

2. Submit a paper to the N. A. C. JOURNAL. Too many of our top flight men are failing to contribute in this manner.

3. Send in leads on possible advertisers in the N. A. C. to the N. A. C. Administrator.

4. Send in suggestions for the N. A. C. Program to the Secretary. Plan now to attend and make ours the "World's Largest Chiropody Meeting."

5. If you are interested in a position in industrial chiropody, plan to take special training so that our profession will be properly represented.

6. Keep a personal list of insurance companies that honor chiropody claims and those who do not. File all insurance claim correspondence. Submit information to your state secretary when requested.

7. Make at least one vocational talk on chiropody this year before: Service club, P. T. A., Explorer Scout Post, High School Class, Men's Club, etc. Send a student to chiropody college.

8. Cooperate in promptly completing and returning Economic survey questionnaire.

9. Revitalize your practice—consult N. A. C. JOURNAL, Vol. 43, No. 11, November 1953.

10. The medical profession respects well-trained, scientific, ethical chiropodists. Assume authority as the foot specialist and back it up by every good precept.

11. Federal Affairs are your affairs. Be informed concerning "Congress Considers" by our N. A. C. Staff and Consultant, Joseph S. Lawrence, M.D., in the N. A. C. JOURNAL. Contact your senators and congressmen when requested to do so.

12. Within the dictates of our ethical code, indulge in a personal program of public information and relations concerning chiropody 365 days a year.

In any organization, valuable and willing talent is sometimes overlooked or unknown. Please accept this message as a directed invitation to every member to make a contribution and feel the spirit of accomplishment. Let's look and move forward.

FELTON O. GAMBLE, D.S.C., *President*

COPIES OF JOURNAL WANTED

WE HAVE run short of copies of the August, September and October issues of the JOURNAL. We would appreciate any copies that members would like to send us.

A SEASONAL COMMUNICATION

THIS ISSUE will arrive in your hands after Thanksgiving and just before the Christmas-New Year season. This gives us the opportunity of giving thanks for the past, taking joy in the present, and wishing well for the future.

The past year has seen some of the profession's aspirations become realized. These successes serve to spur the Executive Council and the Executive Officers in their plans for more successes.

Throughout the world this past year upheavals have been common. Last year our seasons' wishes hoped for a year of peace and prosperity and prosperity with peace. Here in the United States these hopes seem about to be fulfilled, although in many parts of the world this is not so. May we continue to have more years of peace and prosperity.

CONGRESS REORGANIZES

HAVE you called upon or written to your Congressman and Senator since the election? Both will greatly appreciate hearing from you now before they go to Washington, for their time is at a premium and necessarily most important matters including communications receive first attention. If you are on their mailing list you will receive preferred attention when you write this winter concerning pending legislation.

Naturally the election resulted in some change in personnel but not so extensive as was predicted by some. As things look now the Democrats will have a majority in both houses and therefore will have the opportunity to organize them.

In that event the following committee chairmen will be reappointed for this Congress. In the Senate: Labor and Public Welfare, Senator Hill of Alabama; Armed Services, Senator Russell of Georgia; Finance, Senator Byrd of Virginia; Post Office and Civil Service, Senator Olin Johnson of South Carolina; Government Operations, Senator M'Clellan of Arkansas. And in the House of Representatives: Interstate and Foreign Commerce (which handles all health bills) Representative Harris of Arkansas; Ways and Means (Welfare bills) Representative Cooper of Tennessee; Veterans Affairs, Representative Teague of California; Post Office and Civil Service, Representative Tom Murray of Tennessee; Armed Services, Representative Vinson of Georgia, and House Government Operations, Representative Dawson of Illinois. Of course there will be some changes in the membership of the committees which will be announced after organization on January 3rd. We shall report the full changes when they are made public.

In the campaign addresses both parties indicated that they contemplate more or less extensive programs in Health, Medical Care and Welfare, some of which is certain to be of vital interest to you.

Budget Analysis

The Washington office of the American Medical Association has issued a special report in which a most interesting and informative analysis of Government spending in the health field is given. Its first observation is that during the fiscal year 1956-57 the U. S. is spending in health fields alone an average of $15.17 per man, woman and child (population figures provided by Census Bureau) which is $1.78 more than was spent last fiscal year.

If only wage-earners are considered, the average will be $38.72 each to finance the Federal government's health-medical operations which is $4.40 more than was paid last year. On the other hand the average family will be *paying* $54.61 this year for the U. S. Government's health-medical activities.

"Even in an over-all Federal budget of $61.2 billion, the total health cost is not insignificant. It is a billion dollars more than the cost of running the Commerce Department, half a billion more than all Agriculture Department expenses and six times Interior Department's budget."

The total amount budgeted, $2,558,719,168 as over against $2,268,826,576 of last year, is parcelled out as follows:

Agency	*Fiscal 1957*	*Fiscal 1956*
Veterans Administration	$825,024,300	$790,185,800
Department of Defense	790,105,000	818,104,500
Department of Health, Education and Welfare	772,661,800	526,935,400
Federal Civil Defense Admin.	49,810,000	30,450,000
Atomic Energy Commission	31,525,000	27,700,000
International Cooperation Admin.	29,310,000	25,441,000
Department of State	15,496,000	13,669,790
Federal Employees Health Program	10,000,000	6,000,000
National Science Foundation	8,000,000	5,000,000
Department of Labor	7,151,126	7,336,000
Department of Interior	6,138,205	5,770,000
Panama Canal Zone	6,055,300	5,702,900
Department of Treasury	3,511,700	2,990,000
Department of Justice	1,580,000	1,470,000
Federal Trade Commission	1,000,000	1,000,000
Department of Commerce	547,914	277,586
Civil Service Commission	386,000	382,600
National Advisory Committee to Selective Service	180,000	180,000
President's Comm. for Handicapped	134,678	130,000
Health Resources Advisory Comm.	90,000	101,000
Office of Attending Physician of Congress	12,145	.....
TOTALS	$2,558,719,168	$2,268,826,576

MEMBERSHIP DIRECTORY

PLANS have been established to make our Directory an annual directory. It is anticipated that the first of our Annual Membership Directories will be off the presses around May 1st.

Each member is advised to check the address on his Journal envelope and report any necessary corrections to the office of the Secretary of the National Association of Chiropodists.

The Directory listing is compiled from the mailing list. The annual directory will contain the names of all members who are in good standing as of March 1, 1957.

CLINICALLY SPEAKING

A place for the more informal presentation of reminders, suggestions, notes, observations and technics of value in office practice. Your contributions of short manuscripts or illustrative case histories will determine this section's usefulness.

THE SEDIMENTATION RATE IN CHIROPODY PRACTICE

WILLIAM O. WATTLING, M.T., D.S.C.
Lewiston, Idaho

How CAN I improve medical relationships with local physicians? How can I do a better job of diagnosing my patients? Both of these questions can be answered, I believe, with the following statement. By the use of scientific laboratory procedures in the office. We shall, by doing more laboratory work, discover more problems of a general nature. These, of course, are referred to the physician but now with scientific evidence of an existing disorder. I do not feel that any physician can overlook facts such as these for long and not realize that the man is practicing good scientific chiropody. The fact that we will no longer wonder if this patient has this, or that, is quite important in our own practice also. I feel that we have not been using these procedures because we do not understand them. It is expensive and troublesome to send patients out. We can, however, do some procedures in our office with little time and trouble and at little cost to the patient.

The sedimentatin rate is an excellent beginning and gives us much information of a general nature.

History

In 1915, Fahraeus, in a test for pregnancy, discovered that the suspension stability of blood was altered. He later found this acceleration in other diseases as well.

It can be noted that the early Greeks found blood of the healthy quickly formed a clot and serum. In disease it was found that corpuscles deprived of oxygen appeared darker. These settled to the bottom. Above this the red blood cells containing some oxyhemoglobin are found. In rapid sedimentation rates, white blood cells are found (more if a leukocytosis exists) which with the fibrin formed a grey white layer with the serum above. These are called the four humors. It was thought, because these four humors did not mix, that people became sick. Now we know this to be the result of sickness rather than the cause.

The Phenomenon of Sedimentation

The exact nature of sedimentation is not fully understood. The specific gravity of the cells is not a factor as would be thought. It has been found that plasma fibrinogen is increased when the sedimentation rate is accelerated. Therefore, we can assume that in a high sedimentation rate there is an increase in the quantity of fibrinogen in the plasma.

Additional protein fractions also lead to this acceleration. Alpha globulin shows correlation with the fibrinogen levels. A fraction of plasma containing alpha and beta globulin was found to be about one-third as effective in accelerating the sedimentation rate as fibrinogen. Gamma globulin was the least effective of the proteins in accel-

eration and pure albumin was found to inhibit the sedimentation. No relationship between the sedimentation rate and blood sugar, loss of carbon dioxide, blood calcium, or phosphorus was found. It has been reported that cholesterol accelerated the sedimentation rate. Sodium salicylate in vitro causes reduction of the rate but this takes place at a salicylate level of 90 mg., or higher than we obtain therapeutically.

Physical forces concerned are the density of the red blood cells as compared to the density of the plasma. The fall of the red blood cells causes an upward displacement of the plasma, producing upward current or retarding force. In the normal person these forces are nearly equal and little settling occurs. The less the number of red blood cells, the less this retarding effect, and correction must be used for this error. These statements all refer to a vertical column of blood. You can see that if the column is on an angle the cells can slip down the side and create little or no current. The retarding effect depends upon the surface involved. Aggregation of cells, known as Rouleaux formation, is groups of many cells with little surface area. The cells in Rouleaux formation look much like a stack of poker chips somewhat out of line. With this the sedimentation rate is increased. This happens in disease, but why it does is not understood. Fahraeus suggests, however, that these aggregations occur to permit rapid movement of leukocytes while in the blood vessels.

Methods

Blood is collected and mixed with an anticoagulant and placed in a tube in a fixed position exactly vertical. The time required for the blood to fall a specified distance was charted. This is rather impractical, however, so the distance of the fall in a specified time is recorded. The time varies and some methods chart the fall at frequent intervals. This has shown us three phases. 1. Preliminary period when aggregation takes place. 2. Period of rapid fall. 3. The period of cell packing.

Many different types of tubes have been developed for sedimentation rates. Some are slightly more accurate and corrections can be made. In thinking of the need of such a test in the office of the chiropodist, one method stands out as practical in terms of equipment needed and ease of taking. This is the Landau-Adams microsedimentation apparatus procedure. Inasmuch as many chiropodists are not experienced or proficient in doing veinal punctures, we want a method that eliminates this, if possible. The thought of suction apparatuses for cleaning small tubes and pipettes, as well as a need for a centrifuge, is neither practical from the standpoint of cost involved or space, and so this should be eliminated. The fear of patients, especially children, is much greater in a veinal puncture than with a pin prick, and so this method is advisable, practical and invaluable in the chiropodist's office, inasmuch as it meets these requirements.

To name a few of the other methods most commonly used, we have the Westergren, Cutler, Wintrobe, Landsberg and Rouke-Ernstene. Correction is done by the hematocrit, or cell pack, but really is still erroneous since we have various types of anemia.

Technical Factors

1. The time of day has an in-

fluence; best collected between 10 A.M. and 4 P.M.

2. Conduct the test as soon as possible after taking the sample. Delay causes a decrease in rate.

3. The temperature at which the test is conducted is significant. The higher the temperature the higher the rate. It should be 22 to 27 degrees centigrade.

4. Anticoagulants, with the possible exception of heparin, influence the sedimentation rate. Only when the recommended anticoagulant is used in the exact concentration is the influence eliminated.

5. The bore, if the tube does not influence the rate, except in tubes less than 2mm. in internal diameter which are unsatisfactory because sedimentation is uneven in such tubes.

6. The length of the tube is a factor. The longer the tube the greater the rate.

7. The inclination of the tube has an influence. No deviation should be allowed.

8. In obtaining blood for the sedimentation rate from a finger puncture, care should be taken to obtain a large drop of blood without squeezing the finger.

Normals

In the sedimentation rate, as with all laboratory procedures, the normal is based upon the type of technique used. In sending our blood work to commercial or hospital laboratories, it is advisable to inquire as to the normals that they have set up, or get the named technique and check on its normal. We shall list only the normal values of our choice method, which is the Landau-Adams.

In men, and children under the age of two years, the normal fall is from 1mm. to 6mm. fall in one hour. In women, and children over two years of age, the fall is from 1mm. to 9mm. fall in one hour.

Increased values are as follows. Slightly increased — 10mm. to 15mm. Moderately increased — 16mm. to 30mm. High rate — 30mm. or over.

Application and Interpretation

The sedimentation rate is a non-specific test and gives information of a general nature. It is a measure of the presence and intensity of morbid processes within the body. The sedimentation rate may be up when the temperature, pulse and white blood count are normal, especially in chronic disorders and in localized inflammatory disease. Normals vary slightly in women, and this is relative to menstruation, but is not clinically significant. Pregnancy gives definite acceleration in 10 to 12 weeks, gradually increasing and not returning to normal until 3 to 4 weeks post-partum. Increased acute general infections, while in a localized acute inflammatory condition, are indicated by a raise in rate. Chronic localized infections, their nature and extent, are indicated by the degree of raise. Growths do not cause an increase, even if malignant, except if the malignant growth is particularly vascular, with a tendency to break down, and has much reaction around it.

The sedimentation rate is a good test in the occult diseases. An increase suggests an organic rather than a functional disease an inflammatory disease rather than a tumor. If a tumor, malignant rather than benign.

Differential Diagnosis

This will indicate angina pectoris from a coronary; cancer of the stomach rather than a benign lesion; rheumatoid, tubercular,

gouty or gonorrheal arthritis from an osteoarthritis; pelvic inflammatory disease from an uncomplicated ovarian cyst or appendicitis. In pulmonary tuberculosis and rheumatic carditis, this test is used to determine the progress of the course of treatment. In certain diseases like scarlet fever, when the temperature has returned to normal, a high sedimentation rate may be an indication of a complication to follow.

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ACRYLIC SPLINTS FOR SIMPLE DISLOCATIONS AND FRACTURES OF METATARSALS AND PHALANGES

PETER MOGULL, Pod.D.
New York, N. Y.

MOST FRACTURES that the chiropodist sees in his office are simple, with fragments in good position, and with no displacement.

Orthopedic surgeons treat even the simple fractures with a cast from the toes to the tubercle of the tibia, molding the plaster under the longitudinal arch, at times with a walking iron heel. Some suggest an immobilization, with plaster to the middle of the leg.

The acrylic splints modify all this. Needless to state, an X-ray must be taken to establish the location and extent of the fracture, and three views are advised: dorsal-plantar, lateral and oblique. In using the acrylic splints, you avoid the bulky plaster of Paris castings, and minimize the disability and discomfort of the patient.

In treating simple fractures of toes, the method applied by most chiropodists is strapping the injured toe to the next toe. It would be more secure, and would lessen the time of healing, if an acrylic splint were to be used in conjunction with the strapping. Due to the simplicity of removing such splints from the foot, the patient is advised to visit the doctor's office periodically for physiotherapy around the areas of injury, and to follow up the X-ray examination and asepsis of the foot.

Technique: Paint the area of injury with compound tincture of benzoin, then strap with a few strips of adhesive. Apply very thin layer of lanolin over the adhesive. Mix the acrylic powder with the liquid in an ointment jar to a consistency of putty. Spread it on a glass lubricated with lanolin, then roll out with round glass rod, also lubricated, to a thickness of 1/14". Always lubricate your hands with lanolin in handling. Mold sheet of rolled acrylic to the area of injury of the foot. Bandage (temporarily) the entire foot with acrylic splints in position. Insert the entire foot into the shoe. Put the weight of the leg on the foot and as soon as heat is felt by the patient, remove the foot from the shoe, strip off the splint for a few minutes to cool off the acrylic. As it hardens, trim with a burr or sandpaper disc if there are rough edges.

In reapplying, secure the splint to the foot, using a few strips of adhesive. Bear in mind that the adhesive separates easily from the acrylic when you have to reapply the splints. In a fracture of the base of the fifth metatarsal bone, it is recommended that the splint be extended beyond that area.

The advantages of such splints over the other types are:

1. They are not clumsy; 2. They are shaped to the area desired; 3. They do not take much room in shoes; 4. They are durable.

The material used and technique is similar to previously published papers.[1,2] Use a commercial laboratory self-curing acrylic, which can be purchased by the pound, supplied with a sufficient amount of liquid, at a nominal cost. This can be used for at least dozens of splints.

1619 Broadway

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1. Mogull, Peter, Pod.D., "Uses of Methyl Methocrylac (acrylic) in Treatment of Inverted Nails and Construction of Artificial Nails," Journal, N.A.C., February, 1954.
2. Mogull, Peter, Pod.D., New York State Podiatry Journal, April, 1954.

LEG-LENGTH MEASUREMENT

THE average student learns how to determine the difference in leg length by measuring the distance from the anterior superior iliac spines to the internal malleoli. Most become aware of the importance of placing the patient in a symmetrical position on a hard surface and of using a steel tape for measuring. Only recently, the degree of inaccuracy, or "observer error," inherent in the procedure has been investigated.

Nicholas and Bailey carried out such a study at the Royal Air Force Medical Rehabilitation Unit, Collaton Cross, England. Four observers each measured the leg lengths of fifty patients to the nearest one-fourth inch.

The writers conclude that differences of one-half inch or more are likely to be clinically significant, but differences of less than one-half inch are not trustworthy unless they represent an average of at least four measurements.

Similar conclusions may apply in many other areas of medical practice. Certainly, much work remains to be done on the reliability and significance of common clinical observations.

Nicholas, P.J.R., and Bailey, N.T.J.: The Accuracy of Measuring Leg-Length Differences. An "Observer Error" Experiment. Britt. B. J. 2-1247 (November 19), 1955.

REPORT OF BUSINESS ADMINISTRATOR

(Continued from Page 835)

where obviously needed services are presently lacking. With the aid of Dr. Lawrence, Dr. Rubin and I are in close touch with these developments—largely centered in the Department of Health, Education and Welfare and the Department of Defense. Every possible chance to include chiropody in these expanding enterprises is being explored and exploited.

III. Direction of Public Relations

The trade paper of the public relations professionals has this to say, which seems to me to be particularly apropos:

"Public Relations is the management function which evaluates public attitudes, identifies the policies and procedures of an individual or an organization with the public interest, and executes a program of action *to earn* public understanding and acceptance." I underscore and emphasize the words "to earn," and will try to tell you why.

Quite clearly the greatest instrument for effecting the advancement of acceptance by the public is the practicing chiropodist-podiatrist — you. By precept, method of practice, the high value you yourself place on your attainments and importance in the health field, the environment you create, your basic equipment to handle the job to which you are dedicated, you establish the eventual nature of public attitudes. No longer can the profession afford a single practitioner with an inferiority complex. I know we still have them and I hope they'll soon disappear — as they should.

The goal of a PR program is to build a good reputation. There is no reason for an organization to expect measurable results in a year or two when it takes a lifetime to build one for an individual. However, a fine reputation *can* be built —with engineering certainty—for a profession, *if* in his or her practice, the chiropodist will put service to public interest and foot health ahead of all other considerations.

Chiropody doesn't need glamorizing or press agentry, but it does need widely dispersed information regarding its capabilities. This office is familiar with the proper approach to the mass media essential to information distribution, and will cooperate to this end, to the limit, with our standing committees. Dr. Rubin's report to the House of Delegates told of one outstanding example of teamwork on our major 1956 newsbreak—the story in LIFE — that spectacular coup by Gil Hollander and Dr. Kauth of the New York Society of Podiatry with an assist from Abe Rubin of the national office.

We have little difficulty identifying uniformed public attitudes. Too often they are loaded against chiropody-podiatry in the derisive terms of our "horse-and-buggy" era. Our prime—and adequate—refutation is what I saw in my visits to our colleges in Philadelphia, New York, Chicago and Cleveland, which included many hours in their clinics. If widespread knowledge of the skills observed by me in those visits can be substituted for the misappraisals, we'll have no further difficulties.

Every possible move to insure the acceptance of our practitioners in hospitals will be taken. The about-face of Army in finally agreeing to commission chiropodists will help materially. The up-grading of our practitioners in Veterans Administration and other federal agencies, and permanent improvement of Civil Service status for our practitioners, will permit wide employment of our young graduates. Up to now, at grades GS-5 to GS-7, no holder of the D.S.C. or Pod.D. can

afford to work for a government agency, despite the pressing need of the Veterans Administration and others, for their services. The drive to raise these levels to reasonable grades is on in full force.

With the very knowledgeable and steady coaching of Dr. Lawrence we will make a large improvement of our relationships with fellow associations in the medical field. Continually, we run into pleasing evidence of the effect on old-time prejudices, of straight facts persuasively presented, as the result of just ordinary good public relations promotion.

We need to feed facts to the large and potent groups, professional as well as nonprofessional, who have been described as being unaware of what the title "Chiropodist" really stands for, which brings us to one of the most important, and expensive, phases of our newly projected campaign, namely: Promotional Literature.

Just as we need promotional literature in guidance and recruitment campaigns, do we have even greater need for attractive, persuasive, punchy brochures which will adequately sell podiatry-chiropody, its value and its skills, to the separate and huge segments of the public centering around the schools. The practitioner's office is an ideal distribution spot because every patient leaves there conscious of the fact that he or she has been helped and relieved of pain. That patient is more than willing to pass on to others the promise of similar help. Your patients are our ideal press agents.

This program, as I have intimated in the case of literature for recruitment, will cost a lot of money, but when that cost is reduced to a "per kit" basis, and shared by the individuals comprising the full practitioner rolls, the comparative single unit cost will not be excessive.

Let me stress here that very few services or products ever made successful headway in the American economy, without a reasonable dissemination of facts concerning their value and usefulness, to great sections of the public, on a continuing basis. Under the able direction of Vice President Marvin Shapiro, the "Mr. Visual Education" of chiropody, the quality of our presentations will continually improve and increase in scope. We have a tremendous potential "acceptance field" and all we need is money to service that field.

The final phase on which I shall touch is that of:

IV. Internal Liaison

Only indirectly, and I might justifiably add—by invitation—can the National office serve here. None the less, its contribution can be real and valuable. A determined effort will be made to maintain smooth, effective contact with the state societies. Using the medium of the JOURNAL, we will attempt to share with everyone the activities of each, so it is hoped that passing to N.A.C. Washington, knowledge of anything of universal value produced in the states, will become routine.

I have already commented on the vital role which will continue to be played by the colleges in the future of chiropody. This, of necessity, indicates the compelling interest held by this office in every phase of academic activity, and of our intention to avail ourselves fully of the cooperation of all faculties and committees immediately concerned with their direction.

While state and regional meetings are more particularly the concern of the Secretary, I expect to accept as many of the invitations to attend significant local meetings as can be squeezed into a very

demanding schedule.

Contact with state societies, interchange of information on all current promotions, development of information media, personal visits to extend and consolidate acquaintanceships will be a continuous matter of great concern and importance to your National staff.

Now being developed in this office is a program promising increased service to the individual practitioner. It follows, generally, a highly valued suggestion by a committee chairman who has thought out problem and solution with great clarity—Dr. Harry Horowitz—one of your Executive Councilmen.

We are gathering, for ready reference by all members, statistics on all phases of foot health; foot conditions; practitioner population broken down into states and cities; members and nonmembers of the National Association; practitioners in hospitals and the extent of their activities; practitioners in the Armed Services and other federal agencies; those in states including chiropodists in Workmen's Compensation and/or Blue Shield plans; all available literature, clippings, etc.; details on suspected violations of Federal Trade Commission regulations. In other words, we will try to have usable data on anything which members feel affects their success professionally, economically or socially.

This about concludes the fill-in I felt you should have, on my idea of what this new job you have created entails. Under rigid trusteeship controls the unobligated funds of the Association are now being invested to produce the maximum income consonant with safety. All of the fine work of past years to advance the fortunes of our profession is being revived and capitalized. The stone-wall front of Army resistance has been breached. New evidences of acceptance of the validity of our doctorate degree are increasingly apparent in the Office of Education, the U. S. Public Health Service, the National Education Association, and the American Council on Education.

Access to greatly needed funds for research, scholarships and professional attainments (which means the ultimate placement of chiropody in its rightful spot) is already a fact. One such grant from industry has been announced and another will follow shortly. Several additional ones are under negotiation by the trustees of the American Foot Health Foundation, and we are well on our way in a determined effort to prove our right to a share, with medicine, osteopathy and dentistry, of the millions of dollars appropriated by the last congress to advance the health of the Nation. We must have recognition of our right to minister to the public, in our proper field under Workmen's Compensation, Blue Shield-Blue Cross, and the labor unions' welfare insurance programs. Active effort to accomplish these goals is currently under way, and not just vague hope.

Among the greatest benefits you as practitioners receive with your membership in N.A.C. are many which are the least visible, because they are unannounced developments of the activities of your hard-working councils and committees. You get notice of them in capsule form in short JOURNAL articles. Very rarely they will be in the nature of spectacular happenings such as the recent commissioning of chiropodists by Army, or of announcements of cash grants. These are more noticeable but by no means the most significant contributions of your officers, committees, councils and N.A.C. executives.

In closing I wish to acknowledge

a very real obligation to the officers and other members of the Executive Council, many committee chairmen, college faculties and individual practitioners in many states, who have given me a concentrated orientation in the history, problems and goals of chiropody-podiatry. I am appreciative of this chance to visit with you, and I hope we will have many more chances to discuss the thing I know to be close to all your hearts —the progress toward full recognition, by 168 million people, of the essential merit of your cherished profession of chiropody.

Thank you.

3301 16th St., N. W., Washington, D. C.

HENENFELD

(Continued from Page 825)

ture above it. Equilibrium of the foot and the body above it should be the end result of all therapy.

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VOCATIONAL GUIDANCE TIPS

THERE ARE many ways to use the film CHIROPODY AS A CAREER effectively. One is to loan it to a high school. In so doing, a good procedure to follow is to go to see the guidance director. If there is no guidance director, see the principal. Ask him if he has read the occupational study on "Chiropody as a Career." If he says that he hasn't, give him a copy and tell him that you have a film on the same subject available. Then give him a copy of the leaflet which describes this film and say that you will be happy to loan him the film whenever he wishes to use it.

Before you leave, you should mention also that you will be available at any time to talk to any students who are interested in obtaining more information about chiropody, especially on Career Day.

This suggestive activity will be of importance to you. It will inform people in your community concerning chiropody—your occupation and profession.

THE PODOPEDIATRIC CLINIC

JOHN T. SHARP, D.S.C.
Chairman, Committee on Children's Foot Health

This section is devoted to a discussion of the problems peculiar to the child's foot. A separate subject will be considered each month, on a question and answer basis. Members are invited to send in their questions relative to the various phases of podopediatrics. Questions will be answered in accordance with the heading under which they fall.

AVASCULAR NECROSIS

What is Avascular Necrosis?

Avascular necrosis is a disorder, peculiar to growing bone, which is characterized by increased density, fragmentation, and change in the normal contour of an osteogenetic center. It may involve a primary center, in which instance it is referred to as "primary avascular necrosis," or it may attack an epiphysis in which case it is known as "secondary avascular necrosis."

Is Avascular Necrosis known by any other names?

One of the confusing things about this disorder is its involved terminology. It is variously referred to as osteochondritis, osteochondrosis, aseptic necrosis, apophysitis, and osteochondritis deformans juvenalis. Commonly, too, its presence is identified by the use of name of the investigator who first discovered the condition in a given bone area. Thus we have "Koehler's Disease," "Osgood-Schlatter's Disease," "Blount's Disease," "Schuermann's Disease," etc., all used to describe an identical disease—avascular necrosis.

What is the cause of this disease?

The exact cause is at present unknown. Infection, congenital anomalies in the blood supply to the involved bone, glandular disturbances, and trauma have all been suggested as possible etiological factors. Of this group, trauma seems to be the only consistent accompaniment.

What are the symptoms of Avascular Necrosis?

The symptomatology will vary slightly in different locations, but in general it is fairly constant and consists of pain, antalgic limp, limitation of motion, and occasionally mild swelling. Roentgenologically there is increased density, fragmentation, and loss of normal bone contour.

Is the diagnosis of this condition very difficult?

In most instances, the age of the child, the clinical findings and the x-ray characteristics make the diagnosis fairly simple. However, since many of the areas in which avascular necrosis occurs are normally areas of irregular mineralization of bone, it is usually necessary to supplement the roentgenological findings with corresponding clinical symptoms. This is perhaps especially true in cases where the posterior epiphysis (apophysis) of the calcaneus is involved.

What sort of trauma is usually present in these cases?

The trauma may be of two types: direct trauma, such as falls from a height, or blows administered to the area; or it may be in the nature of a chronic microtrauma from constant adverse stress applied by tendons at their points of insertion in the bones affected.

What is the treatment of Avascular Necrosis?

The treatment will of course vary somewhat depending on the area wherein the disease occurs. In general treatment consists of rest of the part, and the removal of any adverse tendon pull which may be present. In the foot, adequate padding will usually suffice to secure relief of symptoms. It may be necessary occasionally to apply hot soaks, or some other form of physical therapy during the acute stages for prompt relief of the pain present. In most instances where avascular necrosis involves one of the foot bones, plaster-of-paris casting is not necessary although such treatment may be indicated in refractory cases. It is important to remember that treatment should be continued until the x-ray findings are negative. The fact that symptoms are no longer present does not necessarily indicate that the condition is no longer active. In general it may be stated that although relief of the acute symptoms occurs shortly after treatment is begun, the actual disease process may be active for several months to a year or more.

What foot bones are commonly affected in Avascular Necrosis?

The calcaneus, navicular and 2nd metatarsal head are most commonly involved.

What sex is most commonly affected in Avascular Necrosis?

As a rule, males are more commonly involved than females. However, in instances of avascular necrosis of the metatarsal heads, females are by far more commonly affected. The greater general involvement of males is quite probably the result of their more active environment predisposing them to injury.

Are some locations more difficult to treat than others in this condition?

My experience has been that the most difficult location to treat in the foot is the metatarsal heads. Some of these cases require much more involved treatment than in other foot areas. There is often a residual deformity of the head of the bone.

What is the prognosis in Avascular Necrosis?

The prognosis in most instances is very good. There is usually complete healing with gradual restoration of normal bone contour, provided of course that treatment has been adequate and is continued over a satisfactory period. The major exception to this in the foot is the so-called Freiberg's Infraction or avascular necrosis involving the second metatarsal head. This occasionally gives rise to discomfort in later life, owing to its effect on normal function of the metatarsophalangeal joint.

What is the age incidence in Avascular Necrosis?

This will depend upon the bone involved. The disease occurs during the stage of osteogenetic activity of the bone in question. Since this varies for different bones, the age at which avascular necrosis is seen will also vary. Thus it is evident that a knowledge of the ossification times of the bones of the extremity is a necessity in the diagnosis of this disease.

A successful man keeps looking for work after he's found a job.

PHARMACEUTICAL PREPARATIONS FOR THE PROFESSION

HARRY L. HOFFMAN, Ph.G., D.S.C.
Chairman, Council on Chiropodical Therapeutics and Pharmacy

A column devoted to preparations, new and old, with emphasis on their value and uses in everyday chiropody practice. This will be a regular monthly column and we invite questions, which we shall endeavor to answer, or obtain the answer.

Meticorten Tablets
(Schering) Prednisone

Description: Meticorten is crystalline prednisone in tablets of 1, 2.5 and 5 mg. each.

Action and Uses: The anti-inflammatory effect of Meticorten is generally noted within 24 to 48 hours following initial administration. Frequently, a response is noted even a few hours after the first dose of Meticorten. In rheumatoid arthritis, pain in affected joints is relieved, swelling and stiffness diminished, and the range of motion is increased. A marked sense of well-being and improved appetite are usually noted.

Dosage: In the treatment of rheumatoid arthritis, dosage of Meticorten begins with an average of 20 to 30 mg. a day. This is gradually reduced by 2.5 to 5 mg. until maintenance dosage of 5 to 20 mg. daily is reached. The total 24 hour dose should be administered after meals and at bedtime. Patients may be transferred directly from hydrocortisone to cortisone to Meticorten without difficulty.

Supply: Meticorten Tablets: 1 mg., in bottles of 100 and 1000. 2.5 mg. in bottles of 30, 100 and 1000. 5 mg. bottles of 30, 100, 500 and 1000.

Meticorten Capsules: 2.5 mg., bottles of 30 and 100. 5 mg., in bottles of 30 and 100. Schering Corporation, 60 Orange Street, Bloomfield, New Jersey.

Typical Prescription:

Rx: Meticorten Tablets 2.5 mg.
Dispense #30
Sig: Take 2 tablets t. i. d. p. c. and at bedtime.

Schering cites the following advantages: Meticorten is three to five times as effective, milligram for milligram, as oral cortisone and hydrocortisone yet strikingly devoid of major undesirable effects at therapeutic dosage.

Such effects as sodium and fluid retention, weight gain due to edema, or excessive potassium depletion which often have precluded therapy with the older compound — cortisone and hydrocortisone — are not observed at dosage of Meticorten sufficient to maintain symptomatic relief.

Many patients previously intractable to former corticosteroid therapy respond to Meticorten. Manifestations of Cushing's Syndrome such as moonface and hirsutism, when induced by long term cortisone or hydrocortisone, often regress when patients are transferred to Meticorten. Dietary restriction of sodium and supplementation of potassium are not required with Meticorten therapy.

Further quoting Schering: Rheumatoid arthritis. Because earlier clinical investigations have proved the therapeutic value of Meticorten in common rheumatic disorders and intractable asthma, it may be presumed that results of a constantly expanding program of clinical research will prove this steroid to be of value in all disorders known to respond to oral cortisone or hydrocortisone. This premise is confirmed by promising preliminary reports on the use of Meticorten in rheumatic fever, nephrosis, intractable allergies, acute pemphigus, disseminated lupus erythe-

matosus, certain cases of aplastic and hemolytic anemia, and periarteritis nodosa.

Neosporin Ointment
(Burroughs Wellcome & Co.)
Antibiotic Ointment

Description: Neosporin brand of polymyxin B — Bacitracin — Neomycin, antibiotic ointment. Each gram of the ointment contains: "Aerosporin" Sulfate Polymyxin B Sulfate 5000 units (equivalent to 0.5 mg. Polymyxin Standard); Bacitracin 400 units; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. neomycin base).

Indications and Uses: In accessible topical bacterial infections whether primary or secondary, due to susceptible organisms. Valuable for prevention of infections in burns, skin grafts, and wounds (surgical and traumatic).

Administration: Apply to the affected parts or area 2 or 3 times a day. May be covered with a dressing or left exposed, as the conditions require.

Supply: In ½ ounce and 1 ounce tubes. Burroughs Wellcome & Company.

Typical Prescription:

Rx: Unguentum Neosporin 30.0
(B. & W. Co.)
Disp. #1 tube.
Sig: Apply to area twice daily night and morning.

Vibruden
(Phila. Ampoule Laboratories)
Antiarthritic, Antipruritic and Capillary Vasodilator

Pharmacological Action: This biochemical (Adenosine-5-monophosphate) is intimately associated with basic life processes. It is present in Coenzymes 1 and 2 and the Flavin Nucleotides and is fundamental in phosphorylation function contributes to an adenosine deficiency and that this may cause pruritus and various skin diseases.

Indications: Vibruden has been found effective in the treatment of bursitis and osteoarthritis. Complete subsidence or marked amelioration of pruritis has been obtained in the treatment of pruritis ani, and pruritis associated with penicillin reaction. In chronic venous insufficiency, Vibruden has been found very effective.

Administration and Dosage: In bursitis, inject, intramuscularly, one (1) cc daily. Dramatic results are usually observed following the fifth or sixth injection.

Osteoarthritis: One (1) cc daily, intramuscularly, to a total of 10 injections then 1 cc every 2 or 3 days for continued relief.

Pruritis: Five 1 cc doses given intramuscularly at hourly intervals. As a rule, response occurs in one or two days. Pruritis associated with penicillin reactions: One (1) cc twice a day intramuscularly. Favorable results can be expected after two or three of the first injections.

Chronic Venous Insufficiency: When phlebectomy is indicated, one (1) cc intramuscularly given preoperatively improves the tonus of veins and reduces the waiting period often needed because of the poor condition of the tissues.

Caution: Do not inject intravenously or subcutaneously. Flushing, dizziness and palpitation may be observed after accidental intravenous injection.

Supplied: Vibruden is supplied in a 10 cc. multiple dose vial, by the Philadelphia Ampoule Laboratories, Philadelphia 23, Pa.

Steinberg's Solution
(Campbell Pharmaceutical Co.)

Description: Steinberg's solution is a sterile aqueous dispersion for injection which contains in each cc. 30 mgm. equivalent to 50,000 U.S.P. units of crystalline vitamin A palmitate together with inert

stabilizing agents. Steinberg's solution is at present supplied for investigational use in rubber capped vials containing 1 cc.

Indications: Steinberg's solution is proposed as a conservative but highly effective agent for the removal of verrucae of kinds wherever they appear on the body. It is considered particularly valuable in mosaic plantar warts, because of their resistance to other forms of therapy. Clinical trial of this solution is also suggested in neurofibrous corns or excressences.

Technique: Prepare the skin as before any surgical procedure. This may include spraying with ethyl chloride, swabbing with a suitable skin disinfectant and drying with sterile gauze.

2. Anesthetize the area by one or more injections as required of 2% procaine-epinephrine solution into the dermis about ¼ inch from the lesions.

3. Inject 0.05 to 0.3 cc. of Steinberg's solution into the base of each verruca or each area of confluent verrucae using a tuberculin syringe and ½" 26 gauge needle. It is preferable to inject slowly while advancing the needle so as to insure good distribution of the Vitamin A. As a precaution, pull back the syringe plunger just before injection to be sure the needle has not entered a vein. If the lesions are extensive it may be necessary to inject one area from several directions. Allow the needle to remain in place for half a minute or so to minimize leakage. Dress with a simple gauze bandage.

4. Give injections at weekly intervals until the lesions regress completely and a normal skin surface remains. From 1 to 4 treatments will be required in most cases although stubborn cases may require as many as twelve injections before being entirely cleared. The patient may be allowed to walk and to bathe throughout the period of treatment.

Distributed by The Campbell Pharmaceutical Co., 79 Madison Ave., New York 16, N. Y.

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THE BEST and THE BIGGEST

1957 Annual Meeting

NATIONAL
ASSOCIATION OF CHIROPODISTS
DRAKE HOTEL
CHICAGO, ILLINOIS

SCIENTIFIC SESSIONS AUGUST 18, 19, 20

"HALL OF SCIENCE" "SCIENCE THEATER"
THE MOSTEST IN TECHNICAL EXHIBITS

ORGANIZATION NEWS

Secretaries of local, state, regional, affiliated, subsidiary and other related organizations are invited to submit copy for this column.

MASSACHUSETTS

At a meeting of the Massachusetts Chiropody Association held on October 1, 1956 the following officers were elected: President, Dr. Frank N. Maconi; President Elect, Dr. Sidney Heller; First Vice President, Dr. Carlman I. Fisher; Second Vice President, Dr. Maxwell P. Zide; Executive Secretary, Dr. Sidney G. Holmes.

The dates for the next Region One conclave are to be September 13, 14 and 15, 1957. The meeting will be held at the Sheraton Plaza Hotel in Boston.

OKLAHOMA

The Oklahoma Chiropody Association held its semi-annual business meeting and post graduate course at the Mayo Hotel in Tulsa on October 20 and 21, 1956. The following scientific program was presented: "The Problems Encountered with Insurance Cases" by Drs. H. R. Johnson, Earl Weibel and Howard Johnson, with Dr. Warren Long serving as moderator, "General Observations of Rheumatoid Involvements Related to the Feet" by Dr. Victor S. Cavener, "The Control of Yearly Contract Chiropodial Patients" by Dr. James F. Hughes, "Practical Use and Demonstrations of the Use of Celastic in Children's Orthopedic Problems" by Dr. Don Landrum and "A New Technique in the Case of Onychomycosis" by Dr. Donald Wheeler. The program was attended by chiropodists from Arkansas, Missouri, Kansas and Texas. The next Oklahoma post graduate course will be held in Oklahoma City in February 1957.

WHEN A WET DRESSING IS REQUIRED...

DOMEBORO®

RECOGNIZED THE WORLD OVER AS THE FINEST OF ALL WET DRESSINGS

When you need a wet dressing as, for instance, with diabetic foot lesions, use DOMEBORO tablets or powder because this finest of all Aluminum Acetate wet dressing is the modernized Burow's solution. It increases drainage and encourages separation of viable and dead tissue. It produces a solution buffered to a pH of 4.2, dermatologically correct for the skin. Stays moist longer, requires less patient attention.

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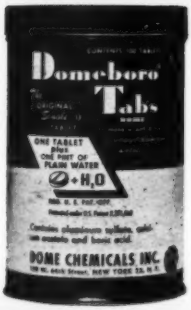
DALI-DOME® powder for Whirlpool baths.



DOME CHEMICALS INC.
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PENNSYLVANIA
Western Division

THE WESTERN DIVISION of the Chiropody Society of Pennsylvania held a meeting on November 1, 1956 at the Mellon Institute in Pittsburgh. Brinely Evans, R. Ph., a representative of the Winthrop Pharmaceutical Laboratories, was the speaker of the evening.

On November 11, 1956 the Western Division held its annual open scientific meeting with practitioners from West Virginia, Ohio, Maryland and Pennsylvania in attendance. The following program was presented: "Crest Therapy" by Dr. S. C. Sivitz and "Peripheral Vascular Diseases of the Lower Extremity" by Dr. Leslie Morris. Dr. Morris recently returned from a post graduate course in Switzerland and presented the latest concepts in the field of vascular disorders.

NORTH PHILADELPHIA

A MEETING of the North Philadelphia Division of the Chiropody Society of Pennsylvania was held on October 9, 1956 at the Drake Hotel in Philadelphia. Dr. Anthony Grieco of Hoboken, New Jersey, gave a demonstration of a new casting technique.

PRESIDENT-ELECT BECOMES FATHER

ON THE NIGHT of November 19, 1956, a son and heir was born to President-Elect Jonas C. Morris and Mrs. Morris.

All the membership congratulates the Morrises.

DR. GEORGE J. DEYO PRESENTED PLAQUE BY THE NEW JERSEY PROPERTY OWNERS' ASSOCIATION

DR. GEORGE J. DEYO of 1165 E. Jersey St., Elizabeth, was honored by fifty fellow members of the New Jersey Property Owners' Association on October 23, 1956 at a din-

NOW AVAILABLE

NEW 4" x 10 YD.

Non-Ravelling

DOME-PASTE® BANDAGE

DOME

The new Dome-Paste bandage is flesh colored, 4" x 10 yd. gauze bandage... impregnated with glycerine, zinc oxide, gelatine paste. Firmly woven with thread-locked edges to resist ravelling. Medicament spreads uniformly, and is easy to apply.

RECOMMENDED for leg ulcers resulting from diabetes, varicose veins and simple weak foot complaints.

Wrapped individually in sealed polyethylene bags, inserted in metal cans to insure freshness.

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True Balance Inlays
and Full Extension Inlays

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prescription.

Metal Whitman Braces

and all other metal
braces made to casts.

For all special custom work, consult us.

Dr. Brachman Laboratories, Inc.
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CHICAGO 14, ILL.

ner meeting at the Essex House, Newark.

The plaque was presented to Dr. Deyo by Mr. Harry Weltchek for his efforts to free housing from governmental control. A report was made on the progress the association had made in its efforts to have the rent control enabling act declared unconstitutional.

DR. IRVING PASHIN APPOINTED STATE CONSULTANT

Dr. Irving Pashin of Poughkeepsie, N. Y., has been appointed to serve as special consultant on podiatry to the chairman of the Workmen's Compensation Board.

Dr. Pashin has practiced podiatry in New York since 1933. He is chairman of the Insurance Committees of both the National Association of Chiropodists and the Podiatry Society of the State of New York.

OUR NEWEST MOULD

The Levy Latex Mould and Contour Inlay made completely of Latex and Sponge Rubber.

After many years of intense research and the cooperation of a prominent Doctor and Competitor, we have at long last succeeded in fulfilling the idea originated by Dr. Ben Levy **TO CUSHION THE FOOT.**

This product constructed of Sponge and Latex Rubber is far superior in comfort to any so-called space shoe, and, very important to our woman to-day, in no way mars the beauty of the shoe.

We strongly recommend it for those suffering from Arthritis, Circulatory or Diabetic conditions. Also for bony, rigid and sensitive feet as well as for Verruca, Ulcers and Scar Tissues. It also is made in an inlay type without crest.

The **ORIGINAL CONTOUR** is retained at all times.

A negative or positive Cast at right angle is necessary.

LEVY & RAPPEL, INC.
384 Columbus Ave., New York 24, N. Y.

Dr. Pashin also served as past president of the Mid-Hudson Division of the Podiatry Society of the State of New York.

FOOT CARE CENTER ESTABLISHED

A COMPLETE podiatry service has been established at the Mt. Morris Park Hospital in New York City by the New York State Podiatry Society.

Podiatrists appointed to the staff of this hospital will perform foot surgery, and make rounds of all departments in the hospital with the medical staff.

The chief of the podiatry service, Dr. Herbert Spertell, will serve as a member of the medical board. All staff podiatrists will enjoy the same status as staff physicians. Staff chiropodists will be invited to participate in clinical conferences and will be able to call upon all medical facilities of the hospital for consultation purposes.

An outpatient clinic has been established covering all aspects of foot care. In addition, hospital beds for inpatients have been made available for podiatry patients, for use after surgery or whenever in the opinion of the podiatrist, hospitalization is necessary.

As part of the foot care center, a research department will be opened, and graduate courses will be offered to practitioners under the direction of the Podiatry Society.

"LIFE'S FOUNDATION — YOUR BABY'S FEET" is an outstanding and comprehensive booklet on the growth and care of children's feet. Written for the layman, it is concise, cleverly illustrated and will prove valuable especially to the parents of young children. Many Chiropodists have received a copy of this booklet and have ordered them in quantity. For those of you who have not ordered and for those who wish to reorder, please clip the order blank below and mail with your check for your supply.

WOMEN'S AUXILIARY
NATIONAL ASSOCIATION OF CHIROPODISTS
2035 WEST ALABAMA, HOUSTON 6, TEXAS

Please ship to me "Life's Foundation — Your Baby's Feet" in the quantity marked:

100 copies	$3.50	☐	P. P. Prepaid
500 copies	16.00	☐	P. P. Prepaid
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Check payable to Women's Auxiliary, NAC, in the amount of $_____ is enclosed.

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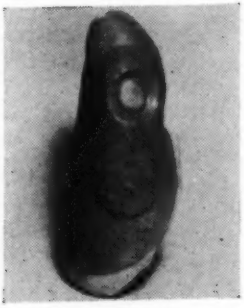
SEE THE EXHIBIT AT YOUR REGION CONVENTION

"The doctor is making his diagnosis now Miss Fudd!"

B

For that next case of

TYLOMA OF THE GREAT TOE



Chronic or acute Heloma, callous or vascular in nature, found on the inner side of great toe.

A prosthesis from cast of condition gives lasting comfort and in a greater percentage of cases a cure of that condition.

Send casts
to

Liquid Rubber Appliance Lab.
489 High Street **Newark 2, N. J.**

Dr. Herbert Spertell, Director of the service, initiated this program and was assisted by Dr. Jerome Faerber. Financial support was given by the Happiness Exchange Foundation radio program which solicited funds from the public to enable this foot care project to be established.

DR. MAURICE R. UDELL COMMISSIONED KENTUCKY COLONEL

Dr. Maurice R. Udell of Chicago, Ill., was commissioned a Kentucky Colonel on October 17, 1956, by the Honorable Governor Alfred B. Chandler of Kentucky. Dr. Udell is a practicing chiropodist and has been a member of the National Association of Chiropodists since 1924.

ALL SURGICAL SUPPLY HOUSES ARE NOT ALIKE

Featuring

- The ADLER D.S.C. EMBLEM. A beautiful new chrome finished emblem with green background and D.S.C. in chrome. An excellent gift for Christmas to your Chiropodist friend. $3.95 each
- The ADLER COUNTERBALANCED HANDLE. Specially designed by Sol Adler, D.S.C., to fit all Gillette and Beaver blades. The difference in weight and design makes for its unique ease in operation. All chrome with no opening on top to prevent capillary attraction.

Season's Greetings

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THE WM. J. STICKEL ANNUAL AWARDS For RESEARCH IN CHIROPODY for 1957

SPONSORED BY THE

Journal of the National Association of Chiropodists and The N.A.C. Agency, Inc.

Thirteenth Year of Awards

First Award—$400.00 **Second Award—$250.00** **Third Award—$100.00**
Fourth Award—$50.00 **Fifth Award—$50.00**

Members who desire to submit papers should make application on a form which can be obtained from the Secretary.

Research papers on any subject in the field of Chiropody may be offered. The final date on which papers will be accepted is April 15, 1957.

See Rules and Pertinent Information, J.N.A.C. Volume 46, Number 11, page 767, November, 1956.

BUTLER'S CHIROPODY SUPPLY CO.

Western Specialists in the Finest All Nationally Advertised Equipment

CHAIRS & STOOLS
RELIANCE
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PAIDAR

ULTRASONICS
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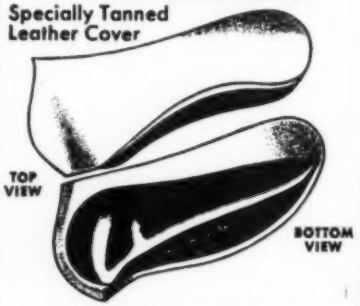

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EXECUTIVE COUNCIL MEETS

THE EXECUTIVE COUNCIL of the National Association of Chiropodists met for a three-day meeting at The Woodner Hotel, Washington, D.C., November 2, 3, and 4.

Firm plans were laid so that the 1957 annual meeting at the Drake Hotel, Chicago, Illinois, August 16-20, would be the biggest and the best to date.

In order that our JOURNAL should be standard with other official professional periodicals, the Executive Council determined that, starting with the January issue, the page size of the JOURNAL would be expanded to 7½ by 10½ inches.

Beginning with May, 1957, the Membership Directory of the Association will be published annually. Plans for this Directory are already under way.

Mr. Irving Gerring, Secretary of Division of Research Grants, National Institutes of Health, Bethesda, Md., addressed a luncheon meeting of the Executive Council. He detailed the scope of activity in the Federal Government in the support of research.

One of the major features of the meeting was a conference on prepaid health insurance plans. The Insurance Subcommittee of the Executive Council is preparing advice information for all affiliated state societies for their guidance.

The next meeting of the Executive Council is set for January 25, 26 and 27, Washington, D.C.

HISTACOUNT

America's Largest Printers to the Professions

MEMO Printing & Records

MOOD ELEVATORS

Contributions to this column are more than welcome. In fact it depends upon them.

A.O.P.

In the late '20s he explored Southeast Alaska by air. He discovered a new glacier and an icy lake at its foot. He named them both for his wife.

Reporting to police the loss of $20.00, she said the money was concealed in her stocking and the loss was discovered soon after the departure of a vacuum cleaner salesman who had been demonstrating his line.

An atheist is a man who doesn't care who wins the Notre Dame-S.M.U. football game.

Every dear little sweet precocious child needs the loving guidance of a father's foot.

STOP!! DON'T GAMBLE
IMPROPER FORCE STRETCHING
AND SEAM WEAKENING.

STELLA'S STRETCH-ALL

A LIQUID PREPARATION GUARANTEED TO STRETCH PERMANENTLY ANY SHOE MADE OF LEATHER, IN LENGTH OR WIDTH.

WILL NOT SPOT, SPLIT OR CRACK THE FINEST OF LEATHER.

STELLA'S STRETCH-ALL

Send Name and Address of Your supplier for free sample.

F. P. STELLA & SONS PRODUCTS
NEW BUFFALO, MICH.

New ***for safe, simple, efficient removal of verruca plantaris***

the IGNATOFF CRYOKIT

Plantar warts, keloids, granulomas, and other superficial podiatric lesions can be obliterated safely and easily — with minimal pain and scarring — with the new Ignatoff Cryokit. Designed especially for use in chiropody, the kit provides a "pencil" of dry ice in a handy, self-insulating applicator of proper size for precise application to lesions without damage to surrounding healthy tissue. Properly treated, lesions slough off in a few days' time, with minimal discomfort and inconvenience for the patient.

Ask your dealer to demonstrate — or write for reprints and literature to

KIDDE MANUFACTURING COMPANY
Bloomfield, New Jersey

"Very, very strange, all I see in the crystal ball are feet!!!"

FOOT BALANCE INLAYS

are only completely
successful
when each case
is individually studied, diagnosed
and an inlay made to fit its
special requirements

The laboratory of

CARL G. BERGMANN, D.S.C.

5406 BROADWAY **CHICAGO 40, ILL.**

originator of foot balance inlays is directed
in all its endeavors to accomplish this result

"I hope you were not worried about this bill," said the delinquent patient.

"Oh no," replied the doctor, "I wasn't worried about the bill. I was just afraid I wouldn't get the money."

With the Hired Boy acting as guide the Tired Business Man set out from the summer boarding house for a little fishing. After they had trudged about a mile the Boy suddenly stopped and exclaimed, "Gosh! I forgot the bait!"

The Tired Business Man rubbed his head, fiddled with his chin and finally said, "Oh well, come on. I don't want to ketch no fish. I jest want to set in the shade."

A garden is a thing of beauty and a job forever.

GRISWOLD'S

FAMILY SALVE

Your insurance of a satisfied patient. The finest adhesive for felt.

Sold by all supply houses

The Griswold Salve Co.

Hartford, Conn.

No. 175 — Men's
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Sizes—Small, Medium, Large

No lefts or rights — can be worn on either foot. Easily stocked.

Doctors say —

"This shoe reduces convalescence to a minimum"

Wood Sole Acts As Splint

REECE ORTHOPEDIC SHOE

for

BROKEN TOES AND FOOT BONES
Burns - Bursitis - Sprains
Hastens Healing "Athlete's Foot"
Dermatitis - Permits Aeration

- **Lightweight WOOD SOLE with airfoam insole acts as SPLINT.**
- **Canvas upper—white or olive drab laces easily over any size bandage.**
- **Saves time for doctors, nurses and patients.**

ORDER TODAY **REECE WOOD SOLE SHOE CO.**

Dept. CH-56 Columbus, Nebr.

Christmas
and
New Year Greetings
to Customers
and Friends

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825 WALNUT STREET
PHILADELPHIA 7, PA.

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SINCE 1935

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LOmbard 3-7393

It's sad for a girl to reach the age
Where men consider her charmless.
But it's worse for a man to attain
the age
Where the girls consider him harmless.

"Son," said the well-to-do man, "when I first came to Chicago I had only one dollar in my pocket to start with."

"Gee, Pop," said the son, "how did you invest the dollar?"

"I used it to pay for a telegram home for more money."

A nickel goes a long way these days—you have to go a long way to find something it will buy.

Sometimes a girl breaks a date by going out with him.

Historians tell us the past. Economists tell us the future. Only the present is confusing.

There is NO one type of Foot Appliance
that is BEST for ALL foot conditions

For that reason we offer you a wide choice of materials and styles

★ **ORLON LAMINATED PLASTICS**
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★ **LEATHER BI-PLANE BALANCERS**
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★ **SEMI-RIGID LEVY MOULDS**
★ **FLEXIBLE LEATHER APPLIANCES**

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ARCHCRAFT LABORATORIES
Manufacturing Custom Foot Appliances
1807 ARCH STREET PHILA. 3, PA.

DEATHS REPORTED

Dr. Eugene T. Litsey
Terre Haute, Ind.

DR. EUGENE T. LITSEY of Terre Haute, Ind., passed away on October 27, 1956. Dr. Litsey had practiced chiropody in Terre Haute for thirty-five years. He was a veteran of World War II and a member of the Masonic and Shrine Lodges of Louisville, Ky.

Dr. Walter J. Geslak
Norristown, Pa.

DR. WALTER J. GESLAK passed away on November 5, 1956. He was a graduate of Temple University and a member of the Lehigh Valley Division of the Chiropody Society of Pennsylvania. Since graduation Dr. Geslak had been associated in practice with Dr. V. Herbert Levin.

Dr. E. K. Crosby
Wheeling, W. Va.

Dr. E. K. Crosby, a retired chiropodist, recently passed away. Dr. Crosby had been a member of the Chiropody Society of West Virginia since 1922 and became a Life Member of the National Association of Chiropodists in August 1956.

DO WE HAVE
YOUR CORRECT
ADDRESS
FOR
DIRECTORY
LISTING?

ACCREDITED CHIROPODY COLLEGES

California College of Chiropody
1770 Eddy Street
San Francisco, Calif.

Chicago College of Chiropody
1422 W. Monroe Street
Chicago, Ill.

Illinois College of Chiropody and Foot Surgery
1327 North Clark Street
Chicago, Ill.

New York College of Podiatry
53 East 124th Street
New York, N. Y.

Ohio College of Chiropody
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February 1-3, 1957
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Scientific Convention
Cleveland, Ohio
February 10-11, 1957
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NEW YORK STATE PODIATRY SOCIETY
Foot Care Conference
New York, N. Y.
February 22-24, 1957
Barbizon Plaza Hotel

ALPHA GAMMA KAPPA FRATERNITY
National Convention
Chicago, Ill.,
March 14, 1957
Hamilton Hotel

REGION THREE
Atlantic City, N. J.
April 25-28, 1957
Ambassador Hotel

REGION SIX
St. Louis, Mo., May 3-5, 1957
Hotel Statler

SOUTHWESTERN CHIROPODY CONGRESS
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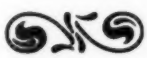

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